



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBD412-729-041
Job Sheet 163759



Part No: RBD412-729-041

Job Qty: 1 pcs

Part Name: Ground Handling Wheels Fits LH or RH (Hydraulic)



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 10/6/17

Job Tracking No:

Due Date: 10/20/17

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG RBD3233-041 REV 2 , RBD3330-041 REV 2 , RBD412-729-011 REV 2 IPP Rev.A 17.07.03 New issue
DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
110	Outsource	1 pcs		10/20/17	0.00	0.00	Outsource5		
120	Packaging	1 pcs		10/20/17	0.00	0.00	Packaging2		
130	QC	1 pcs		10/19/17	0.00	0.00	QC6		18.0124
131	Small Fab	1 pcs		10/20/17	0.00	1.00	Small Fab-3		MCC DAS
132	QC	1 pcs		10/20/17	0.00	0.00	QC5		38
140	Packaging	1 pcs		10/20/17	0.00	0.00	Packaging3		9-89
150	QC	1 pcs		10/20/17	0.00	0.00	QC21		

Part Op

Descriptions: 131 - 1-Transfer drill placard debur holes. 2-Engrave placard using Marktronic 3-Rivet placard 4-Install labels

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
RBD412-729-041P	Ground Handling Wheels Fits LH or RH (Hydraulic)	1 pcs (1 ea)	110-Outsource	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-Outsource	RBD412-729-041P	1	0	0

Part Specifications

Specifications could not be found.

RBD3309-1

5035918 2X

Plex 1/29/18 2:28 PM Dart.lajeunesse.marie

RBD3309-3

5035951 2X

(000206)

RBY 41011

5021040 2X

st-308 MS20600-AD4W3

5019431 8X



Serial No: S033473



Part: RBD412-729-041P

Original Serial #:

Revision:

Inspector:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hewkesbury, ON K64 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
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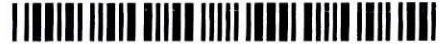
Date: 01/18/18 13:31 PM



Dart Hawkesbury
1270 Aberdeen St
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RBD412-729-041
Job Sheet 163759



Part No: RBD412-729-041

Job Qty: 1 pcs

Part Name: Ground Handling Wheels Fits LH or RH (Hydraulic)



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 10/6/17

Job Tracking No:

Due Date: 10/20/17

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG RBD3233-041 REV 2 , RBD3330-041 REV 2 , RBD412-729-011 REV 2

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Due Date	Standard		Workcenter/Supplier	
				Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time
110	Outsource	1 pcs	10/20/17	0.00	0.00	Outsource5	18-18
120	Packaging	1 pcs	10/20/17	0.00	0.00	Packaging2	18-18
130	QC	1 pcs	10/20/17	0.00	0.00	QC6	
140	Packaging	1 pcs	10/20/17	0.00	0.00	Packaging3	
150	QC	1 pcs	10/20/17	0.00	0.00	QC21	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
110-Outsource	RBD412-729-041P	1	0	0	0

Part Specifications

Specifications could not be found.

Plex 10/6/17 2:48 PM Dart.lajeunesse.marie

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS	
Part No. _____		Rework ☐		Skid-tub ☐	
NCR No. _____		Scrap ☐		Machinir ☐	
		Use-as-is ☐		Thermoformir ☐	
		Suspected Unapproved ☐		Large F ☐	
Date: _____		Step #: _____		QTY Eff _____	
Description Work Order Deviation					
Root Cause					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperatur ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Rout ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Da ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamin: ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersir ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too S' ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructio ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐		
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

Change No:

Operation:

Revision:

Original Serial #: S033473

PART NO: RBD412-729-041

Packaging

Mfg Date: 01/18/18

Job No: 163759

Ground Handling Wheels Fits LH or RH (Hydraulic)

\$033473

DART AEROSPACE

Water Jet ☐

Engineering ☐

Quality ☐

Other ☐

(QSI042) Approval

By _____

Supervisor
rification

Coordinator
roval

ed Wrong

Dimensions

nder tolerance

correct

st/Missing

oved

ng

ad

ng Sequence

Dart Aerospace Ltd.
1270 Aberdeen Street
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CANADA
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Work Order ID 163759

Friday, July 07, 2017 8:22:35 AM

163759

Page 1

Item ID: RBD412-729-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Ground Handling Wheels Fits LH or RH (Hydraulic)

Start Date: 7/7/2017 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 8/9/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference:

**DAS
13
9-89****JUL 07 2017**

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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RBD3233-041	2
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RBD3330-041	2
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RBD412-729-011	2
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110

Outsource process - Machining

0.00

110

HAAS CNC VERTICAL MACHINING #1

336.00

Outsource5

Memo

Outsource process - Machining

Issue P/O to Metec : 36956
Machine as per dwg RBD412-729-041
C of C is required**JUL 07 2017****DAS
13
9-89***RDB 17/07/07*

120

Receive & Inspect for Damage & Mat'l Certs

0.00

120

Packaging

Memo

0.02

Packaging

Ensure C of C is attach

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
☐ OTHER : _____					

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Page 2

Reference:

Stop *NR2*

0.00

0.02

Memo

Quality Control

0.00

0.01

Memo

Packaging

0.00

0.10

Memo

Quality Control

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

Picklist Print

Friday, July 07, 2017 8:22:33 AM

Page 1

Work Order ID: 163759

163759

Parent Item: RBD412-729-041

RRD412-729-041

Parent Item Name: Ground Handling Wheels Fits LH or RH (Hydraulic)

Start Date: 7/7/2017

Required Date: 8/9/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev.A 17-07-03 New issue DP Verify DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
RBD412-729-041P		Purchased	No	10-21-06		110	Each	0.0000	1	1			10-21-06
RRD412-729-041P									**				
Ground Handling Wheels Fits LH or RH (Hydraulic)													

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: <u>163759</u> Part No. <u>RBD 412-729-041</u> NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date : <u>JAN 29 2018</u>		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval <u>Mha</u> <u>1/29/18</u>																		
Description Work Order Deviation				Disposition			Completed By																		
INSTALL R341011 PHACARD USING QTY (4) MS20600-AD4W3 RIVETS DRILL QTY (4) # 30 HOLES INTO GHL ASSY IN ORDER TO INSTALL PHACARD				ACCEPTABLE TO DRILL AND GHL AND INSTALL NUTS TO SECURE PHACARD																					
							Lead hand / Supervisor Approval Verification																		
							QC / QA Coordinator Approval																		
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____																			

DAS
13
9-88

W/O: 163759

[illegible]

QTY	ASSY	QTY	ASSY	QTY	ASSY	B/O	Part #	UNIT	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
						B/O	RD3330-041		WHEEL ASSY			1
						B/O	RD3330-041		FRAME WELDMENT			2
						B/O	RD3331-1		HANDLE			3
						B/O	RD3331-5		DOWNL PIN			4
						B/O	RD3331-5		GRIP			5
						B/O	RD3332-041		PIN ASSEMBLY			6
						B/O	RD3332-1		HANDLE			7
						B/O	RD3332-5		PIN			8
						B/O	RD3332-5		SHAFT			9
						B/O	RD3332-043		PIN ASSEMBLY			10
						B/O	RD3332-7		PIN			11
						B/O	RD3332-9		SHAFT			12
						B/O	RD3333-1		BASE PLATE			13
						B/O	RD3333-3		SLIDING PLATE			14
						B/O	RD3333-5		ROL			15
						B/O	RD3333-6		WHEEL SHAFT			16
						B/O	RD3333-1		SPRING			17
						B/O	RD3333-3		SPRING			18
						B/O	RD3333-6		JACK ASSY			19
						B/O	RD3333-8		STUD			20
						B/O	RD3333-1		NUTLOCK NUT			21
						B/O	RD3333-3		WASHER			22
						B/O	RD3333-7		SLOTTED NUT			23
						B/O	RD3333-9		COTTER PIN			24
						B/O	RD3333-9		HEX HEAD CAP SCREW			25
						B/O	RD3333-9		HEX HEAD CAP SCREW			26
						B/O	RD3333-9		HEX HEAD CAP SCREW			27
						B/O	RD3333-9		HEX HEAD CAP SCREW			28
						B/O	RD3333-9		HEX HEAD CAP SCREW			29
						B/O	RD3333-9		HEX HEAD CAP SCREW			30
						B/O	RD3333-9		HEX HEAD CAP SCREW			31
						B/O	RD3333-9		HEX HEAD CAP SCREW			32
						B/O	RD3333-9		HEX HEAD CAP SCREW			33
						B/O	RD3333-9		HEX HEAD CAP SCREW			34
						B/O	RD3333-9		HEX HEAD CAP SCREW			35
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						B/O	RD3333-9		HEX HEAD CAP SCREW			37
						B/O	RD3333-9		HEX HEAD CAP SCREW			38
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						B/O	RD3333-9		HEX HEAD CAP SCREW			40
						B/O	RD3333-9		HEX HEAD CAP SCREW			41
						B/O	RD3333-9		HEX HEAD CAP SCREW			42
						B/O	RD3333-9		HEX HEAD CAP SCREW			43
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						B/O	RD3333-9		HEX HEAD CAP SCREW			45
						B/O	RD3333-9		HEX HEAD CAP SCREW			46
						B/O	RD3333-9		HEX HEAD CAP SCREW			47
						B/O	RD3333-9		HEX HEAD CAP SCREW			48
						B/O	RD3333-9		HEX HEAD CAP SCREW			49
						B/O	RD3333-9		HEX HEAD CAP SCREW			50
						B/O	RD3333-9		HEX HEAD CAP SCREW			51
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						B/O	RD3333-9		HEX HEAD CAP SCREW			57
						B/O	RD3333-9		HEX HEAD CAP SCREW			58
						B/O	RD3333-9		HEX HEAD CAP SCREW			59
						B/O	RD3333-9		HEX HEAD CAP SCREW			60
						B/O	RD3333-9		HEX HEAD CAP SCREW			61
						B/O	RD3333-9		HEX HEAD CAP SCREW			62
						B/O	RD3333-9		HEX HEAD CAP SCREW			63
						B/O	RD3333-9		HEX HEAD CAP SCREW			64
						B/O	RD3333-9		HEX HEAD CAP SCREW			65
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						B/O	RD3333-9		HEX HEAD CAP SCREW			70
						B/O	RD3333-9		HEX HEAD CAP SCREW			71
						B/O	RD3333-9		HEX HEAD CAP SCREW			72
						B/O	RD3333-9		HEX HEAD CAP SCREW			73
						B/O	RD3333-9		HEX HEAD CAP SCREW			74
						B/O	RD3333-9		HEX HEAD CAP SCREW			75
						B/O	RD3333-9		HEX HEAD CAP SCREW			76
						B/O	RD3333-9		HEX HEAD CAP SCREW			77
						B/O	RD3333-9		HEX HEAD CAP SCREW			78
						B/O	RD3333-9		HEX HEAD CAP SCREW			79
						B/O	RD3333-9		HEX HEAD CAP SCREW			80
						B/O	RD3333-9		HEX HEAD CAP SCREW			81
						B/O	RD3333-9		HEX HEAD CAP SCREW			82
						B/O	RD3333-9		HEX HEAD CAP SCREW			83
						B/O	RD3333-9		HEX HEAD CAP SCREW			84
						B/O	RD3333-9		HEX HEAD CAP SCREW			85
						B/O	RD3333-9		HEX HEAD CAP SCREW			86
						B/O	RD3333-9		HEX HEAD CAP SCREW			87
						B/O	RD3333-9		HEX HEAD CAP SCREW			88
						B/O	RD3333-9		HEX HEAD CAP SCREW			89
						B/O	RD3333-9		HEX HEAD CAP SCREW			90
						B/O	RD3333-9		HEX HEAD CAP SCREW			91
						B/O	RD3333-9		HEX HEAD CAP SCREW			92
						B/O	RD3333-9		HEX HEAD CAP SCREW			93
						B/O	RD3333-9		HEX HEAD CAP SCREW			94
						B/O	RD3333-9		HEX HEAD CAP SCREW			95
						B/O	RD3333-9		HEX HEAD CAP SCREW			96
						B/O	RD3333-9		HEX HEAD CAP SCREW			97
						B/O	RD3333-9		HEX HEAD CAP SCREW			98
						B/O	RD3333-9		HEX HEAD CAP SCREW			99
						B/O	RD3333-9		HEX HEAD CAP SCREW			100
						B/O	RD3333-9		HEX HEAD CAP SCREW			101
						B/O	RD3333-9		HEX HEAD CAP SCREW			102
						B/O	RD3333-9		HEX HEAD CAP SCREW			103
						B/O	RD3333-9		HEX HEAD CAP SCREW			104
						B/O	RD3333-9		HEX HEAD CAP SCREW			105
						B/O	RD3333-9		HEX HEAD CAP SCREW			106
						B/O	RD3333-9		HEX HEAD CAP SCREW			107
						B/O	RD3333-9		HEX HEAD CAP SCREW			108
						B/O	RD3333-9		HEX HEAD CAP SCREW			109
						B/O	RD3333-9		HEX HEAD CAP SCREW			110
						B/O	RD3333-9		HEX HEAD CAP SCREW			111
						B/O	RD3333-9		HEX HEAD CAP SCREW			112
						B/O	RD3333-9		HEX HEAD CAP SCREW			113
						B/O	RD3333-9		HEX HEAD CAP SCREW			114
						B/O	RD3333-9		HEX HEAD CAP SCREW			115
						B/O	RD3333-9		HEX HEAD CAP SCREW			116
						B/O	RD3333-9		HEX HEAD CAP SCREW			117
						B/O	RD3333-9		HEX HEAD CAP SCREW			118
						B/O	RD3333-9		HEX HEAD CAP SCREW			119
						B/O	RD3333-9		HEX HEAD CAP SCREW			120
						B/O	RD3333-9		HEX HEAD CAP SCREW			121
						B/O	RD3333-9		HEX HEAD CAP SCREW			122
						B/O	RD3333-9		HEX HEAD CAP SCREW			123
						B/O	RD3333-9		HEX HEAD CAP SCREW			124
						B/O	RD3333-9		HEX HEAD CAP SCREW			125
						B/O	RD3333-9		HEX HEAD CAP SCREW			126
						B/O	RD3333-9		HEX HEAD CAP SCREW			127
						B/O	RD3333-9		HEX HEAD CAP SCREW			128
						B/O	RD3333-9		HEX HEAD CAP SCREW			129
						B/O	RD3333-9		HEX HEAD CAP SCREW			130
						B/O	RD3333-9		HEX HEAD CAP SCREW			131
						B/O	RD3333-9		HEX HEAD CAP SCREW			132
						B/O	RD3333-9		HEX HEAD CAP SCREW			133
						B/O	RD3333-9		HEX HEAD CAP SCREW			134
						B/O	RD3333-9		HEX HEAD CAP SCREW			135
						B/O	RD3333-9		HEX HEAD CAP SCREW			136
						B/O	RD3333-9		HEX HEAD CAP SCREW			137
						B/O	RD3333-9		HEX HEAD CAP SCREW			138
						B/O	RD3333-9		HEX HEAD CAP SCREW			139
						B/O	RD3333-9		HEX HEAD CAP SCREW			140
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						B/O	RD3333-9		HEX HEAD CAP SCREW			143
						B/O	RD3333-9		HEX HEAD CAP SCREW			144
						B/O	RD3333-9		HEX HEAD CAP SCREW			145
						B/O	RD3333-9		HEX HEAD CAP SCREW			146
						B/O	RD3333-9		HEX HEAD CAP SCREW			147
						B/O	RD3333-9		HEX HEAD CAP SCREW			148
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						B/O	RD3333-9		HEX HEAD CAP SCREW			154
						B/O	RD3333-9		HEX HEAD CAP SCREW			155
						B/O	RD3333-9		HEX HEAD CAP SCREW			156
						B/O	RD3333-9		HEX HEAD CAP SCREW			157
						B/O	RD3333-9		HEX HEAD CAP SCREW			158
						B/O	RD3333-9		HEX HEAD CAP SCREW			159
						B/O	RD3333-9		HEX HEAD CAP SCREW			160
						B/O	RD3333-9		HEX HEAD CAP SCREW			161
						B/O	RD3333-9		HEX HEAD CAP SCREW			16

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REVISIONS			
REV	ECR	DESCRIPTION	DATE
			INITIAL
			APPROVED

RBD3331-5

RBD3331-1

RBD3331-3

.18

RBD3331-041
HANDLE ASSY



TITLE
GROUND HANDLING WHEELS

DWG NO. RBD412-729-011
RBD3331-041

REV
2

MAT'L
TREAT
FINISH POWDER COAT YELLOW
SPEC FED #13538

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
.XXX ± .005 FRACTIONS ± 1/8
.XX ± .01 ANGLES ± 5°
.X ± .1 SURFACES = 125/✓
1. BREAK ALL SHARP EDGES
.015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY
AFTER PLATING
3. INTERPRET DIM AND TOL PER
ASME Y14.5M-2009

DRAWN BY: GILBERT

CHECKED:

OPPS APPR:

QA APPR:

APPROVED: GILBERT

USED ON MODEL
SEE NOTE 2 SHT 1

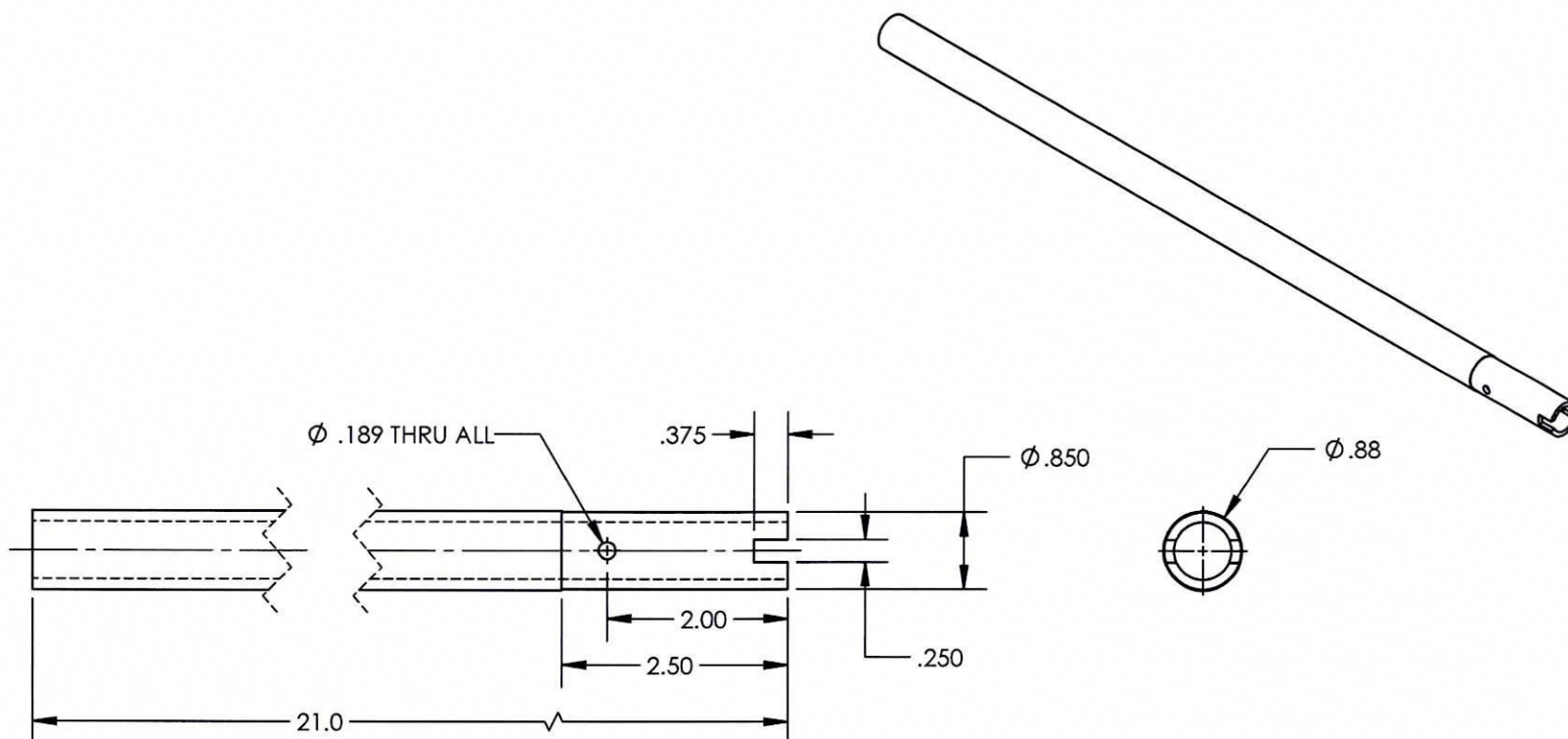
SCALE 1:4

DATE 3/15/2012

SHEET 2 OF 19

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
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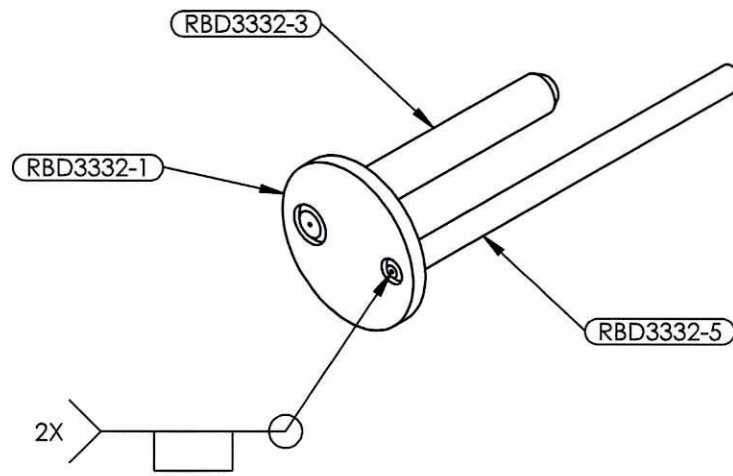
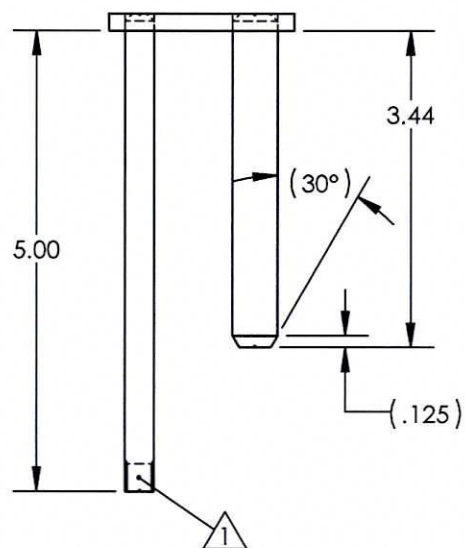


RBD3331-1
HANDLE

DART AEROSPACE	
TITLE GROUND HANDLING WHEEL	
DWG NO. RBD412-729-011 RBD3331-1	REV 2
MAT'L DOM RBD3331-041	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/
SPEC	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
DRAWN BY: GILBERT	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
CHECKED:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
OPPS APPR:	USED ON MODEL
QA APPR:	SEE NOTE 2 SHT 1
APPROVED: GILBERT	
SCALE 1:2	DATE 3/15/2012 SHEET 3 OF 19

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
				APPROVED



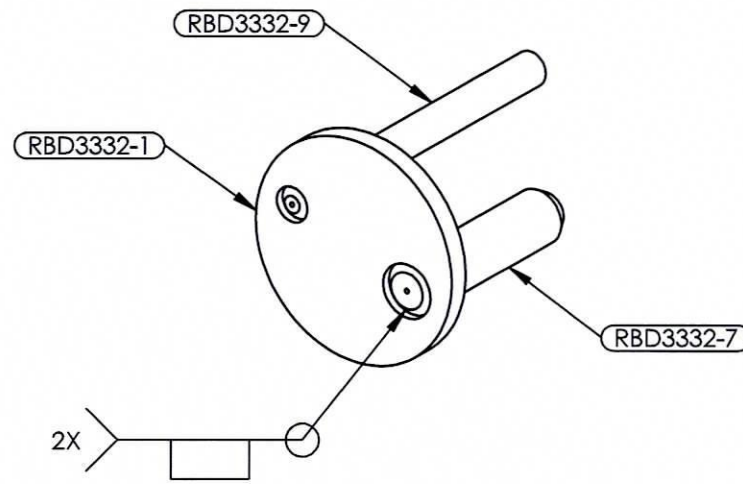
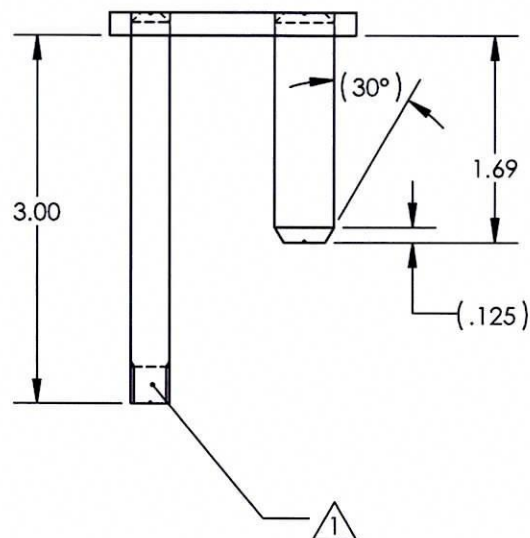
NOTE:
1) NO POWDER COAT ON THREADS.
2) POSITION PARTS USING D3332-041T1.

RBD3332-041
PIN ASSEMBLY

DART AEROSPACE	
TITLE GROUND HANDLING WHEEL	
DWG NO. RBD412-729-011 RBD3332-041	REV 2
MAT'L FRT TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± .5° .X ± .1 SURFACES = 125/✓
FED #13538	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
DRAWN BY: GILBERT	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
CHECKED:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
OPPS APPR:	USED ON MODEL
QA APPR:	SEE NOTE 2 SHT 1
APPROVED: GILBERT	
SCALE 1:2	DATE 3/15/2012 SHEET 4 OF 19

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
				APPROVED



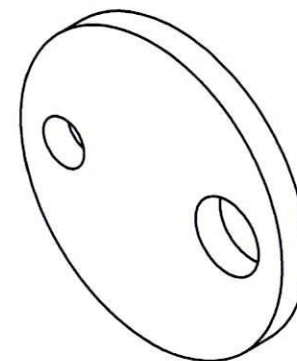
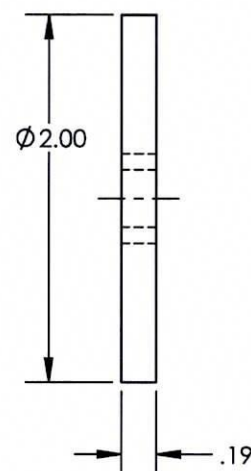
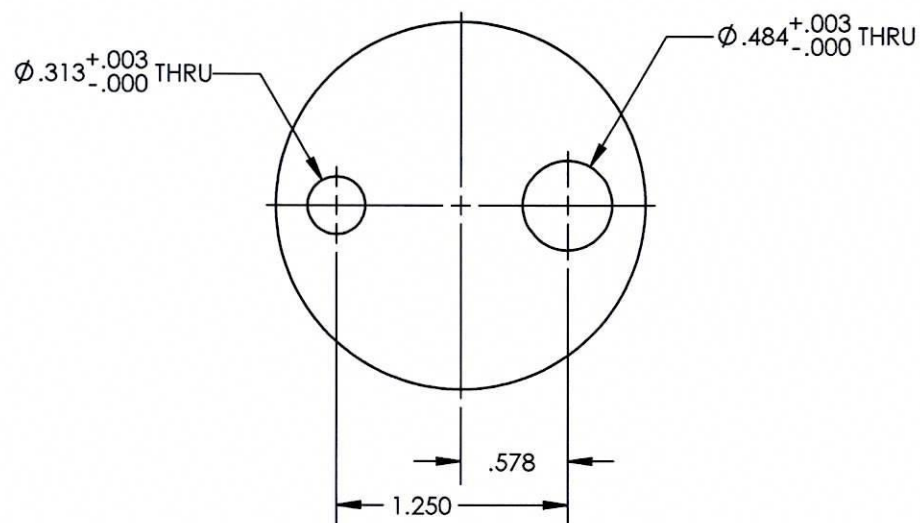
NOTE:
1) NO POWDER COAT ON THREADS.
2) POSITION PARTS USING D3332-041T1.

RBD3332-043
PIN ASSEMBLY

DART AEROSPACE	
TITLE GROUND HANDLING WHEEL	
DWG NO. RBD412-729-011 RBD3332-043	REV 2
MAT'L TREAT FINISH SPEC DRAWN BY: CHECKED: OPPS APPR: QA APPR: APPROVED:	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/✓ 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009 USED ON MODEL SEE NOTE 2 SHT 1
SCALE 2:3	DATE 3/15/2012
SHEET 5 OF 19	

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
				APPROVED

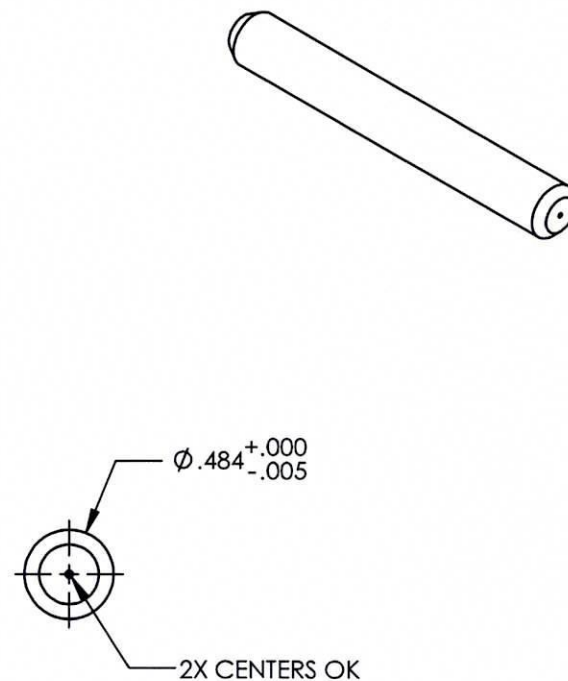
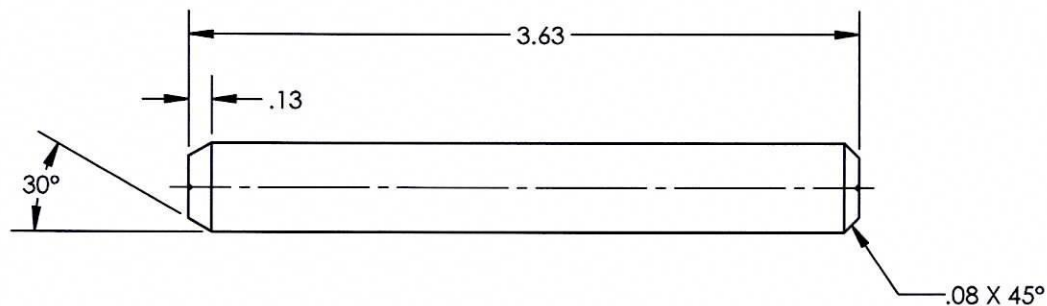


RBD3332-1
HANDLE

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3332-1	REV 2
MAT'L 1018/1020 CR TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125°
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED:	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR:	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 SHT 1
SCALE 1:1	DATE 3/15/2012 SHEET 6 OF 19

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
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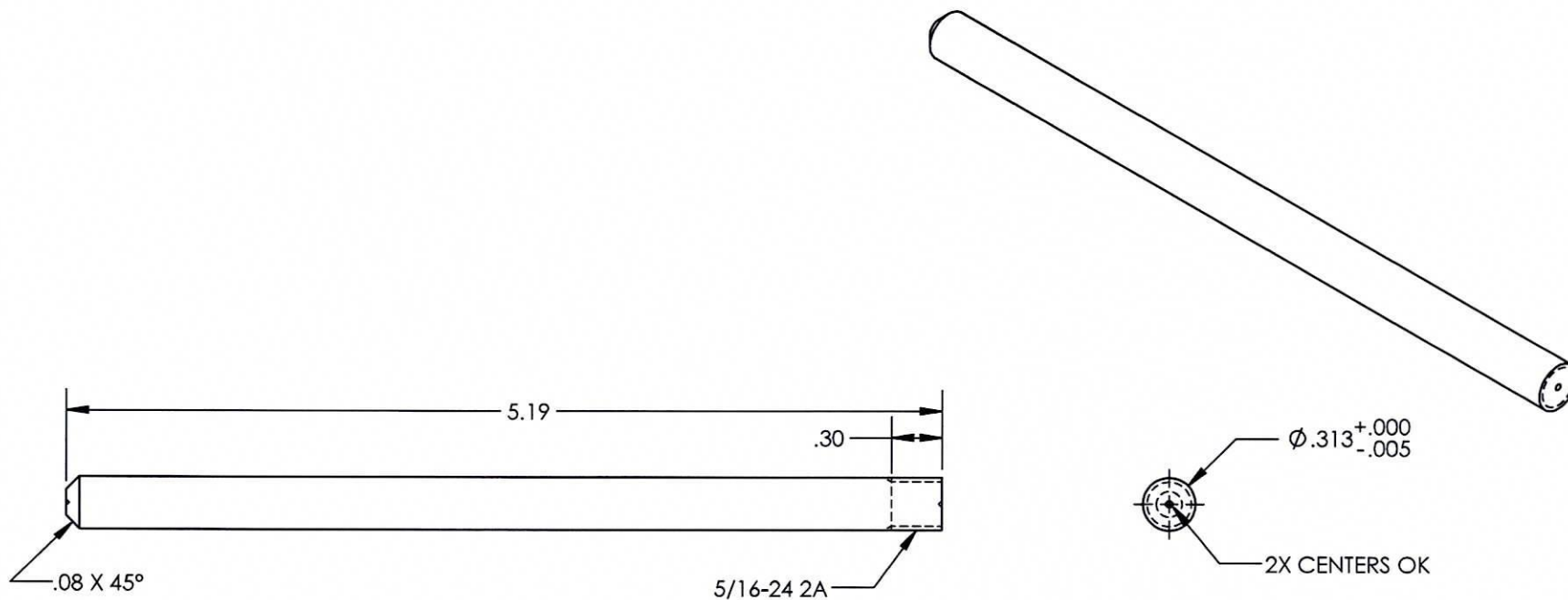


RBD3332-3
PIN

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3332-3	REV 2
MAT'L 1018/1020 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH SEE RBD3332-041	.XX ± .01 ANGLES ± .5°
SPEC	.X ± .1 SURFACES = 125
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED:	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR:	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 SHT 1
SCALE 1:1	DATE 3/15/2015 SHEET 7 OF 19

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0039	RBD3332-9 MOVED TO SEPERATE SHEET.	2/16/2016	SM	JAG

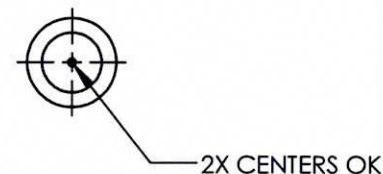
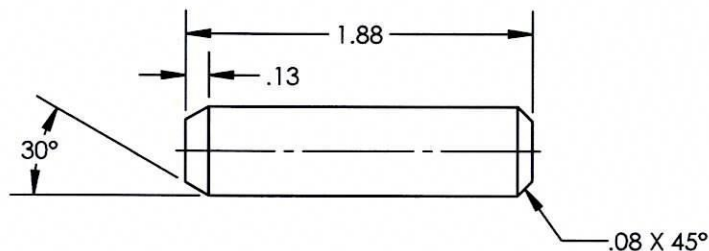
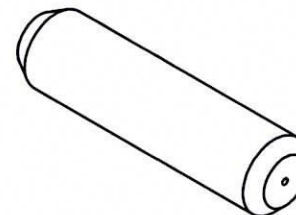


RBD3332-5
SHAFT

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3332-5	REV 2
MAT'L 1018/1020 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH SEE RBD3332-041	.XX ± .01 ANGLES ± .5°
SPEC	.X ± .1 SURFACES = 125/✓
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED:	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR:	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 SHT 1
SCALE 1:1	DATE 3/15/2012 SHEET 8 OF 19

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
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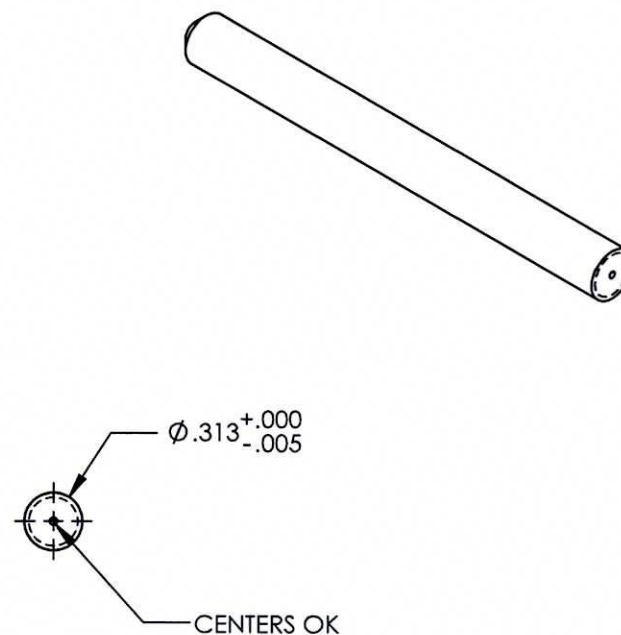
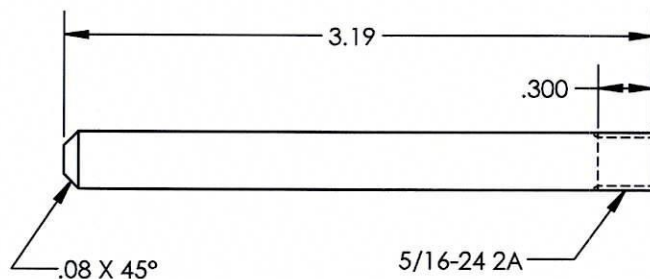


RBD3332-7
PIN

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3332-7	REV 2
MAT'L 1018/1020 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH SEE RBD3332-043	.XX ± .01 ANGLES ± 5°
SPEC	.X ± .1 SURFACES = 125 ✓
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED:	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR:	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 SHT 1
SCALE 1:1	DATE 3/15/2015 SHEET 9 OF 19

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REVISIONS					
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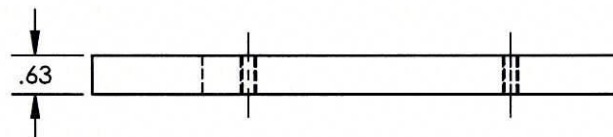
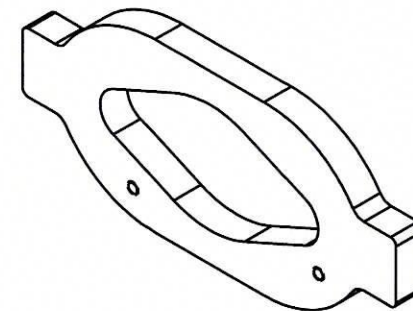
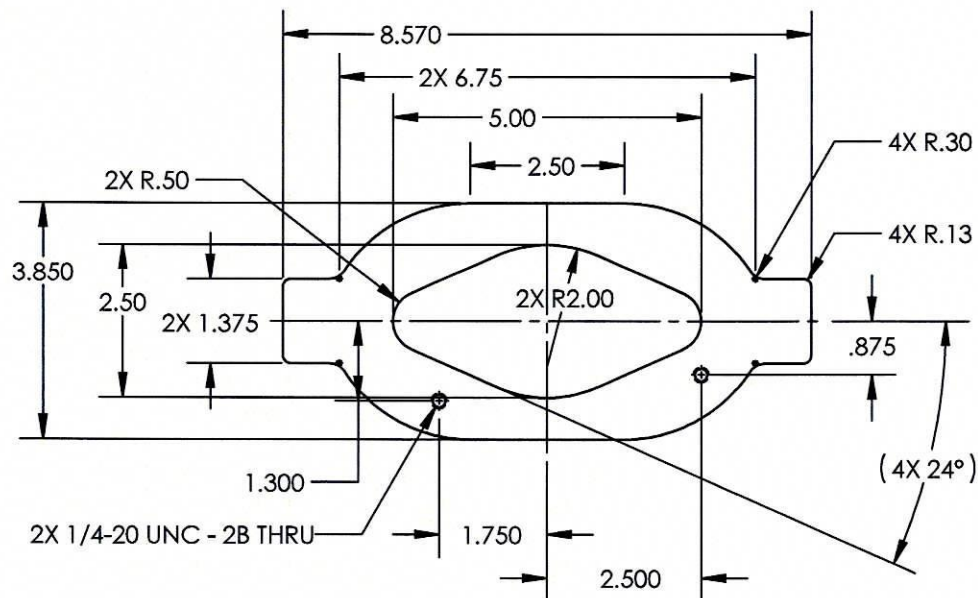
RBD3332-9

SHAFT

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3332-9	REV 2
MAT'L 1018/1020 CR HEAT TREAT FINISH SEE RBD3332-043 SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± .5° .X ± .1 SURFACES = 125/✓
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED:	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR:	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 SHT 1
SCALE 1:1	DATE 3/15/2012 SHEET 10 OF 19

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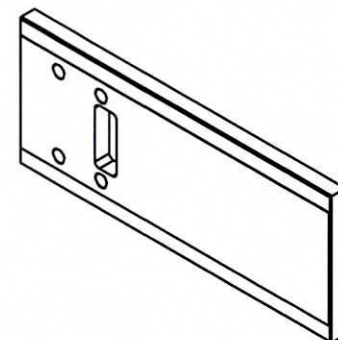
REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED



RBD3333-1
BASE PLATE

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3333-1	REV 2
MAT'L 4140/4142	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH POWDER COAT YELLOW	.XX ± .01 ANGLES ± 5°
SPEC FED #13538	.X ± .1 SURFACES = 125/✓
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED:	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR:	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 SHT 1
SCALE 1:3	DATE 3/15/2012
SHEET 11 OF 19	

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0039	RBD3333-3 CHD DIM WAS .650 IS .660, WAS 1.200 IS 2X 1.200.	2/17/2016	SM	JAG

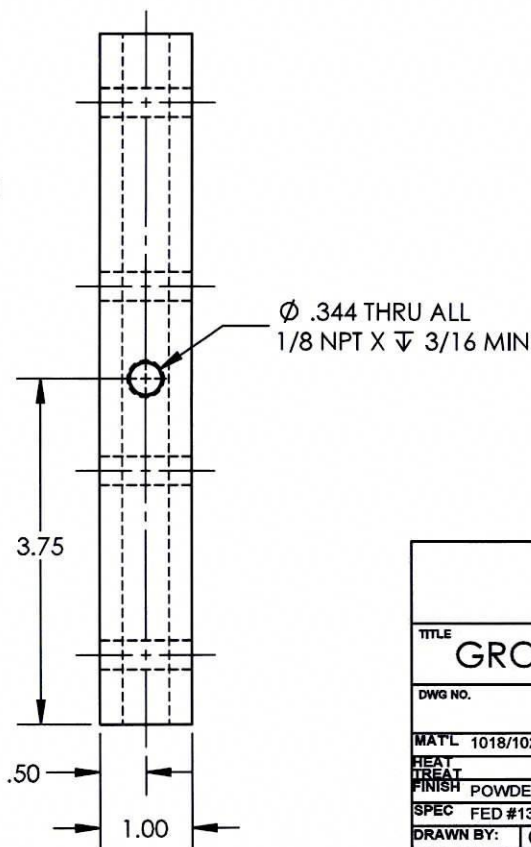
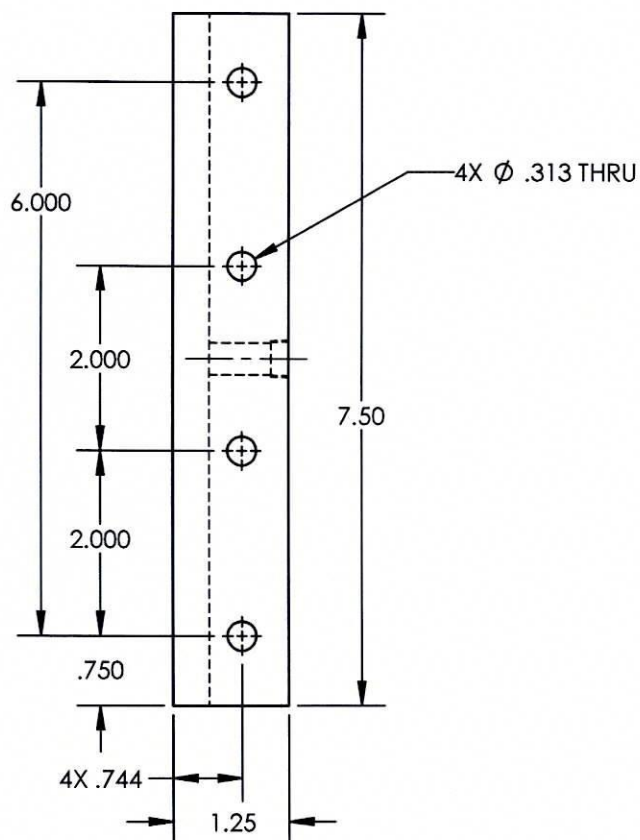
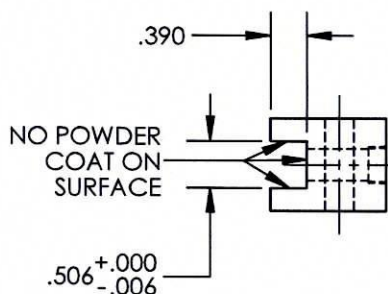


RBD3333-3
SLIDING PLATE

			
TITLE GROUND HANDLING WHEELS			
DWG NO.		RBD412-729-011 RBD3333-3	
MAT'L 4140/4142		REV 2	
HEAT TREAT FINISH POWDER COAT YELLOW		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125√	
SPEC FED #13538		1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
DRAWN BY: GILBERT		2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
CHECKED:		3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
OPPS APPR:		USED ON MODEL	
QA APPR:		SEE NOTE 2 SHT 1	
APPROVED: GILBERT		SCALE 1:3 DATE 3/15/2012 SHEET 12 OF 19	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		-5 CH'D DIM WAS Ø.332 IS .344.	6/18/2014	RJC	GE
2	16-0039	RBD3333-5 CH'D DIM WAS Ø.334 IS Ø.344.	2/17/2016	SM	JAG

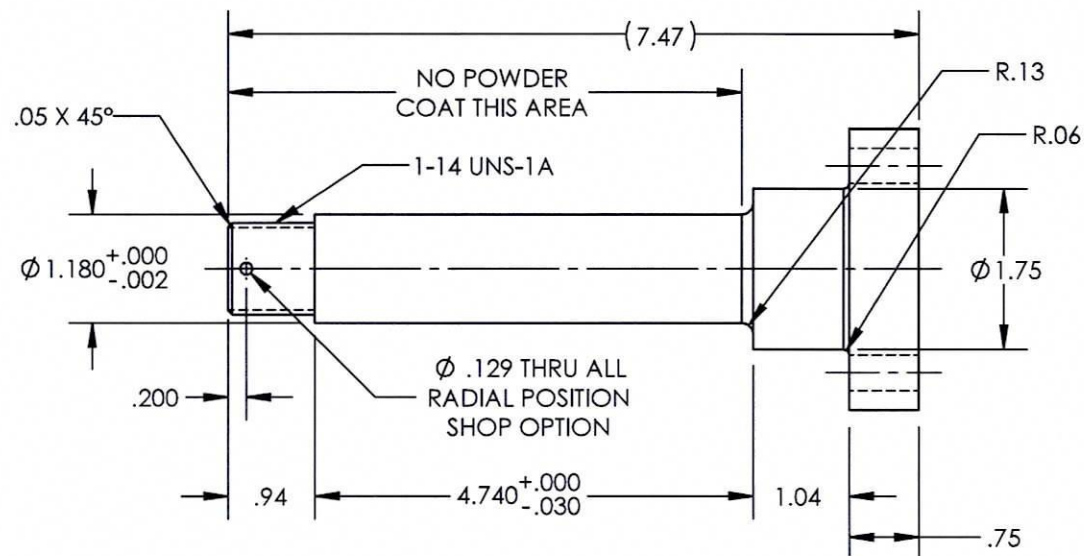
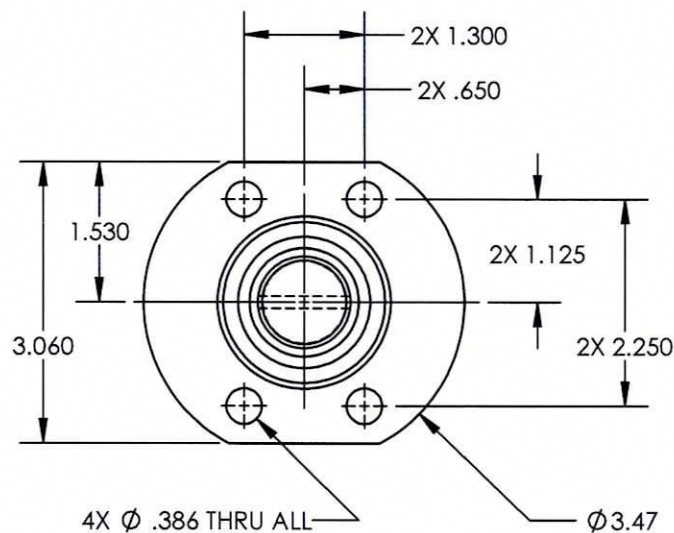
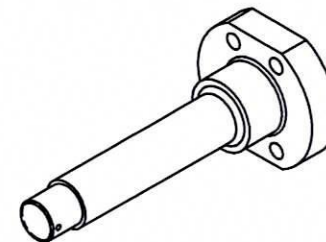


RBD3333-5
RAIL

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3333-5	REV 2
MAT'L 1018/1020 CR TREAT FINISH POWDER COAT YELLOW SPEC FED #13538 DRAWN BY: GILBERT CHECKED: OPPTS APPR: QA APPR: APPROVED: GILBERT SCALE 1:2	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/✓ 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009 USED ON MODEL SEE NOTE 2 SHT 1 DATE 3/15/2012 SHEET 13 OF 19	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0039	RBD3334-1 CH'D DIM WAS 7.47 IS (7.47).	2/17/2016	SM	JAG

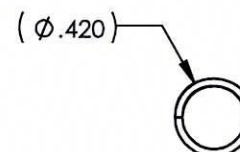
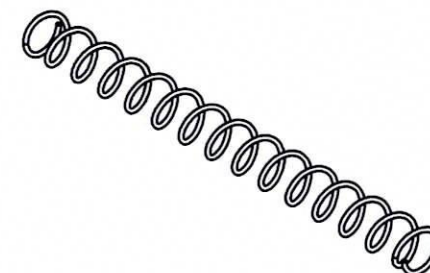
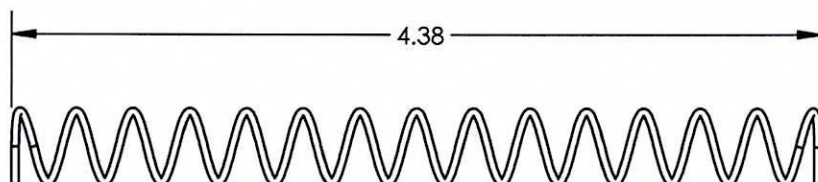


RBD3334-1
WHEEL SHAFT

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3334-1	REV 2
MAT'L 4140/4142	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
FINISH POWDER COAT YELLOW	.XXX ± .005 FRACTIONS ± 1/8
SPEC FED #13538	.XX ± .01 ANGLES ± 5°
DRAWN BY: GILBERT	.X ± .1 SURFACES = 125/✓
CHECKED:	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
OPPS APPR:	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
QA APPR:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
APPROVED: GILBERT	USED ON MODEL
SCALE 1:2	DATE 3/15/2012
	SHEET 14 OF 19

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0039	RBD3335-3 MOVED TO NEW SHEET.	2/16/2016	SM	JAG

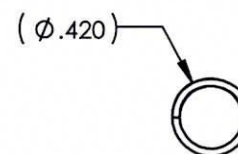
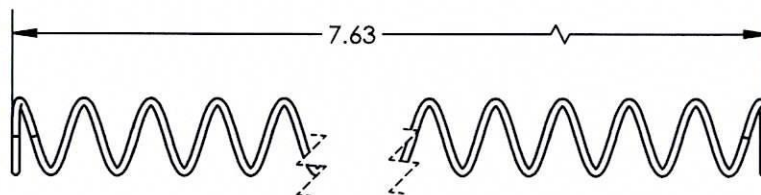
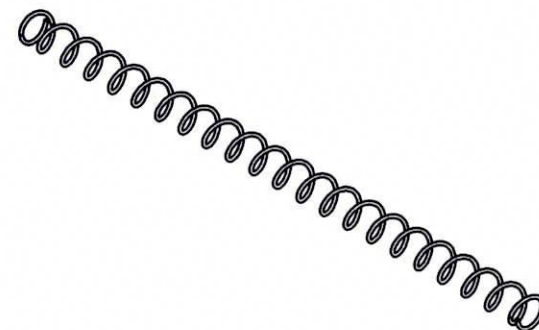


RBD3335-1
SPRING

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3335-1	REV 2
MAT'L STEEL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH	.XX ± .01 ANGLES ± 5°
SPEC	.X ± .1 SURFACES = 125/✓
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED:	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR:	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 SHT 1
SCALE 1:1	DATE 3/15/2012 SHEET 15 OF 19

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
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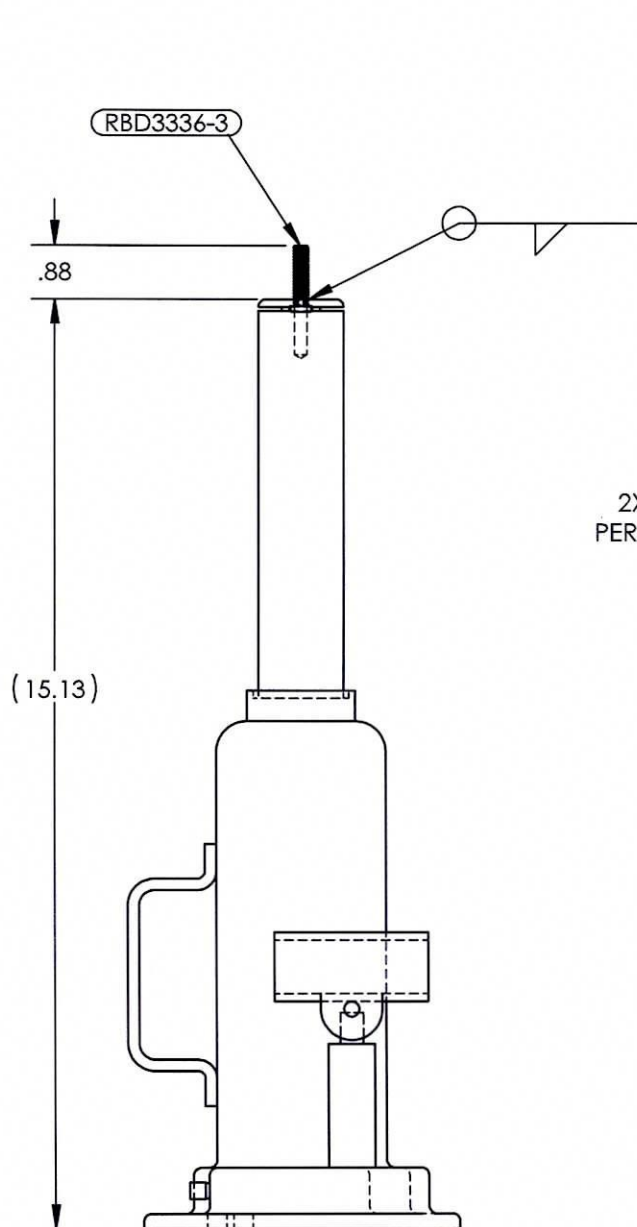


TITLE GROUND HANDLING WHEELS

DWG NO.		RBD412-729-011 RBD3335-3	REV 2
MAT'L STEEL		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT		.XXX ± .005 FRACTIONS ± 1/8	
TREAT		.XX ± .01 ANGLES ± 5°	
FINISH		.X ± .1 SURFACES = 125/✓	
SPEC		1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
DRAWN BY:		GILBERT	
CHECKED:			
OPPS APPR:		2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
QA APPR:		3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
APPROVED:		USED ON MODEL	
APPROVED:		GILBERT	
SCALE		1:1	DATE 3/15/2012 SHEET 16 OF 19

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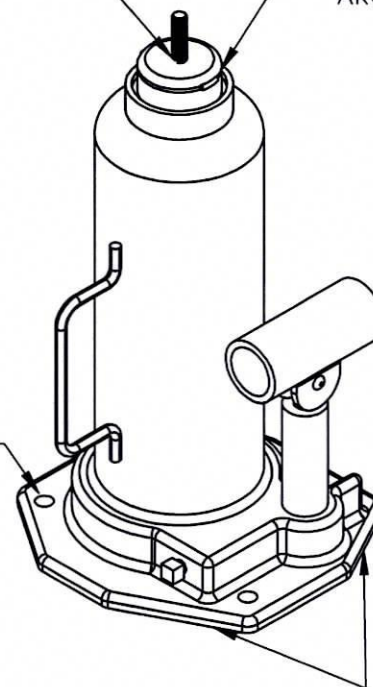
REVISIONS			
REV	ECR	DESCRIPTION	DATE
			INITIAL
			APPROVED



1/4-20 ∇ .75
AT CENTER OF CAP

WELD CAP WITH SHAFT WITH .38
LONG TACK WELDS (2 PLACES)
AROUND PERIMETER

2X $\varnothing$.313 THRU ALL
PER TEMPLATE DT8761



TRIM EDGES AS PER
TEMPLATE DT8761A
AND PAINT CUTS TO
MATCH COLOR.

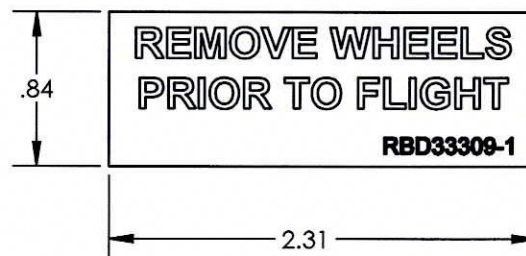
RBD3336-1

JACK

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3336-1	REV 2
MAT'L HEAT TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX $\pm$.005 FRACTIONS $\pm$ 1/8 .XX $\pm$.01 ANGLES $\pm$ 5° .X $\pm$.1 SURFACES = 125°
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED:	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR:	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 SHT 1
SCALE 1:3	DATE 3/28/2012
SHEET 17 OF 19	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0039	RBD3309-3 MOVED TO SEPERATE SHEET.	2/16/2016	SM	JAG



NOTE:

1) MATERIAL: BLACK LETTERS ON ADHESIVE BACK

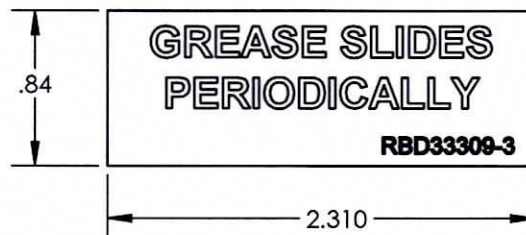
RBD3309-1
LABEL, REMOVE BEFORE FLIGHT

DART AEROSPACE	
TITLE ROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3309-1	REV 2
MAT'L HEAT TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125°
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED:	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR:	USED ON MODEL
APPROVED: GILBERT	
SCALE 1:1	DATE 3/15/2015 SHEET 18 OF 19

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0039	RBD3309-3 ADDED TO NEW SHEET.	2/16/2016	SM	JAG

**GREASE SLIDES
PERIODICALLY**
RBD3309-3



NOTE:

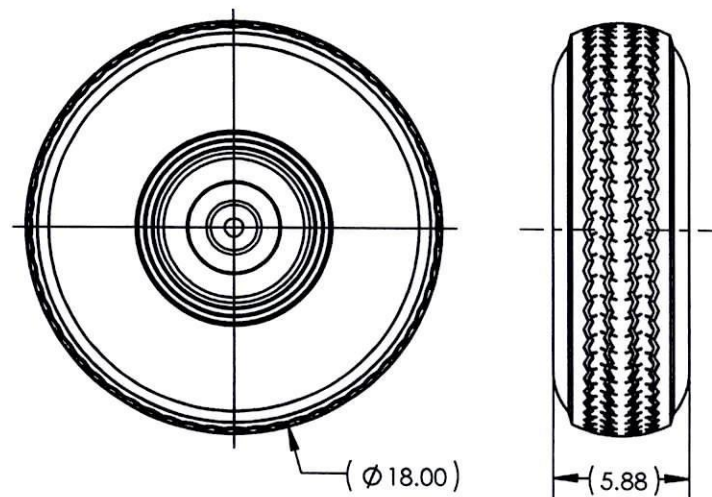
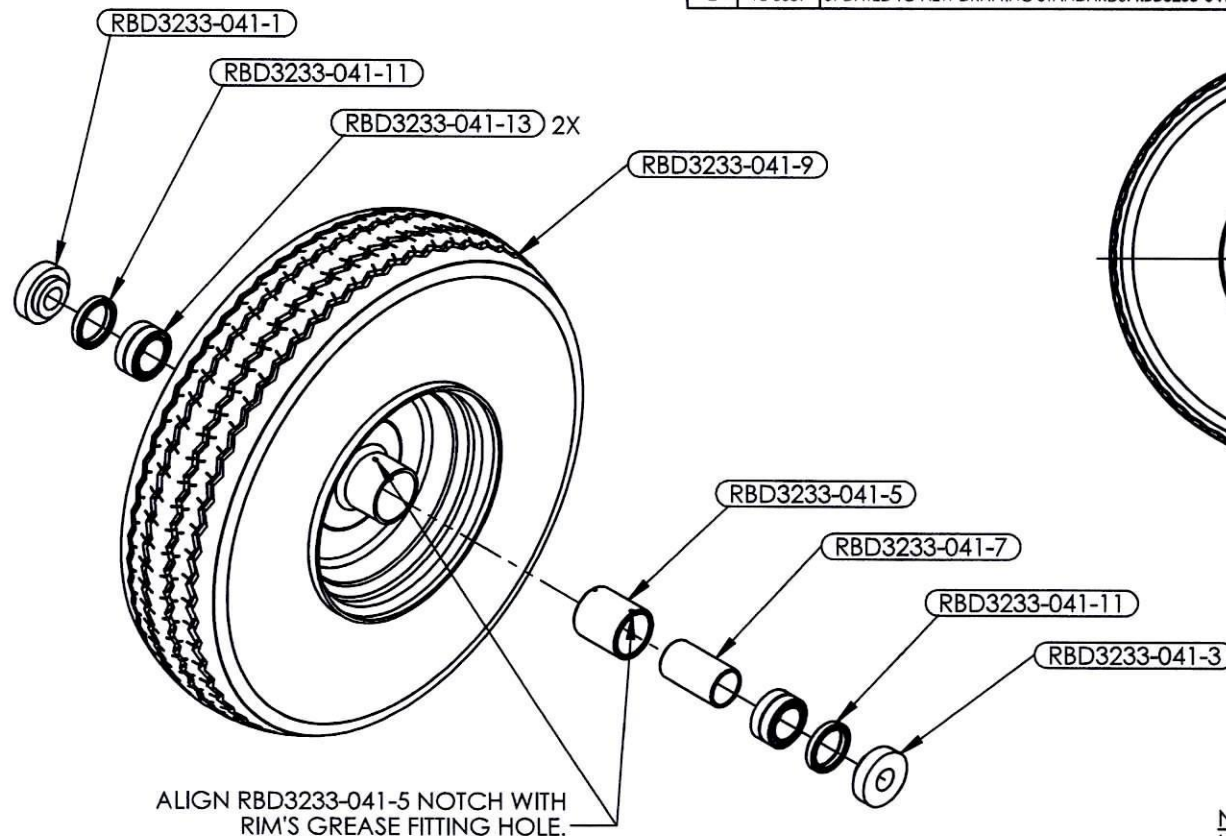
1) MATERIAL: BLACK LETTERS ON ADHESIVE BACK

DART AEROSPACE	
TITLE ROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3309-3	REV 2
MAT'L REAT TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED:	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR:	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR:	USED ON MODEL
APPROVED: GILBERT	
SCALE 1:1	DATE 3/15/2015 SHEET 19 OF 19

RBD3309-3
LABEL, GREASE SLIDES

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
C		UPDATE TO NEW DRAFTING STANDARD	4/16/2012	JAG
2	16-0039	UPDATED TO NEW DRAFTING STANDARDS. RBD3233-041-5 ADD DIM 2X FULL R.	2/15/2016	SM JAG



WHEEL SPECIFICATIONS		
SIZE	MAX. LOAD	MAX. INFLATION PRESSURE
TIRE: 19.0 x 5.8 RIM: 5.70 x 8.0	910 lbs. (RANGE C)	90 psi*

* MANUFACTURER'S RECOMENDATIONS ARE 75 PSI FOR HIGH SPEED USE.

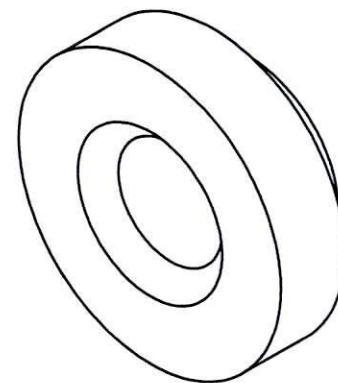
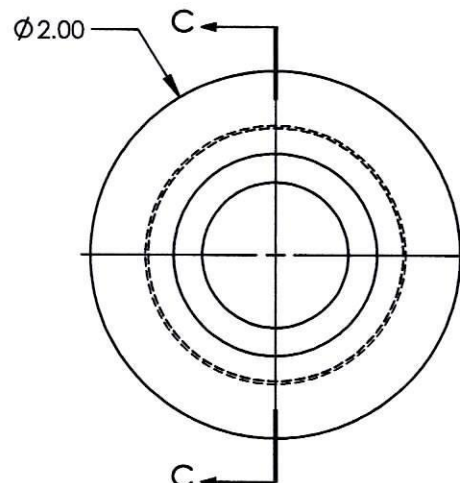
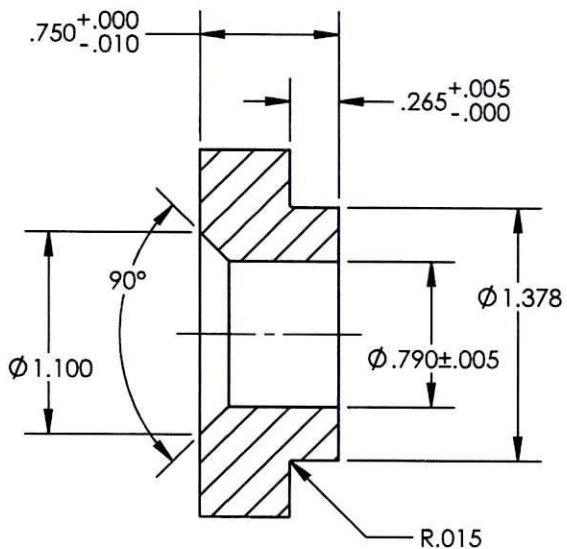
NOTE:
USED ON BELL MODELS 204, 205, 212,214,412, UH1, 222, 230, & AH1

DART AEROSPACE																			
TITLE GROUND HANDLING WHEELS																			
DWG NO. RBD412-729-011 RBD3233-041	REV 2																		
<table border="1"> <tr> <td>MAT'L</td> <td>UNLESS OTHERWISE SPECIFIED</td> </tr> <tr> <td>TREAT</td> <td>DIMENSIONS ARE IN INCHES</td> </tr> <tr> <td>FINISH</td> <td>.XXX ± .005 FRACTIONS ± 1/8</td> </tr> <tr> <td>SPEC</td> <td>.XX ± .01 ANGLES ± .5°</td> </tr> <tr> <td></td> <td>.X ± .1 SURFACES = 125/</td> </tr> <tr> <td colspan="2">1. BREAK ALL SHARP EDGES .015 x 45° OR .015R</td> </tr> <tr> <td colspan="2">2. DIMENSIONAL LIMITS APPLY AFTER PLATING</td> </tr> <tr> <td colspan="2">3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009</td> </tr> <tr> <td colspan="2">USED ON MODEL</td> </tr> </table>		MAT'L	UNLESS OTHERWISE SPECIFIED	TREAT	DIMENSIONS ARE IN INCHES	FINISH	.XXX ± .005 FRACTIONS ± 1/8	SPEC	.XX ± .01 ANGLES ± .5°		.X ± .1 SURFACES = 125/	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R		2. DIMENSIONAL LIMITS APPLY AFTER PLATING		3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009		USED ON MODEL	
MAT'L	UNLESS OTHERWISE SPECIFIED																		
TREAT	DIMENSIONS ARE IN INCHES																		
FINISH	.XXX ± .005 FRACTIONS ± 1/8																		
SPEC	.XX ± .01 ANGLES ± .5°																		
	.X ± .1 SURFACES = 125/																		
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R																			
2. DIMENSIONAL LIMITS APPLY AFTER PLATING																			
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009																			
USED ON MODEL																			
DRAWN BY: GILBERT CHECKED: CLOUGH OP'S APPR: ANDERSON QA APPR: LINDSAY APPROVED: GILBERT	SCALE 1:8 DATE 3/16/2012 SHEET 1 OF 5																		

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
			RBD3233-041-1	1	INSIDE WASHER	1018/1020 CR		2
			RBD3233-041-3	1	OUTSIDE WASHER	1018/1020 CR		3
			RBD3233-041-5	1	HUB SLEEVE	1018/1020 CR		4
			RBD3233-041-7	1	SHAFT SLEEVE	1018/1020 CR		5
		B/O	RBD3233-041-9	1	TIRE & WHEEL ASSY		MCMASTER-CARR # 8353T88	1
		B/O	RBD3233-041-11	2	BEARING SEAL		TCM 35X45X7TC	1
		B/O	RBD3233-041-13	2	ROLLER BEARING		NKI 30/20	1

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
				APPROVED



SECTION C-C

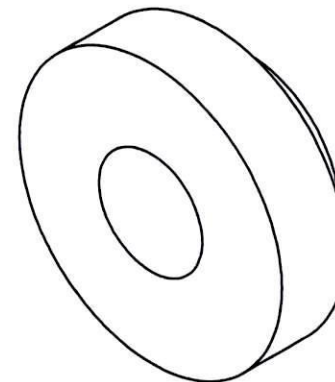
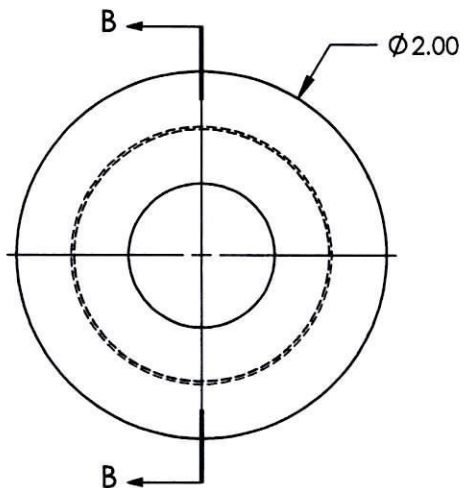
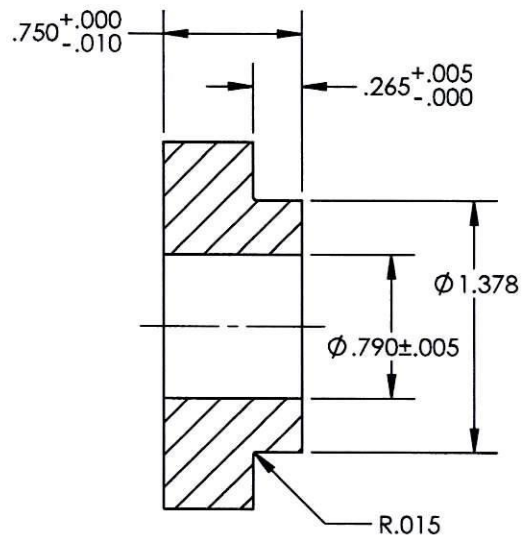
RBD3233-041-1

INSIDE WASHER

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3233-041-1	REV 2
MAT'L 1018/1020 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH POWDER COAT YELLOW	.XX ± .01 ANGLES ± 5°
SPEC FED #13538	.X ± .1 SURFACES = 125/✓
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	
SCALE 1:1	DATE 3/16/2012
SHEET 2 OF 5	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED



SECTION B-B

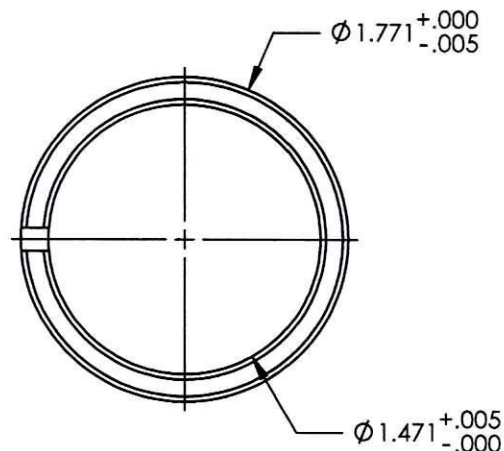
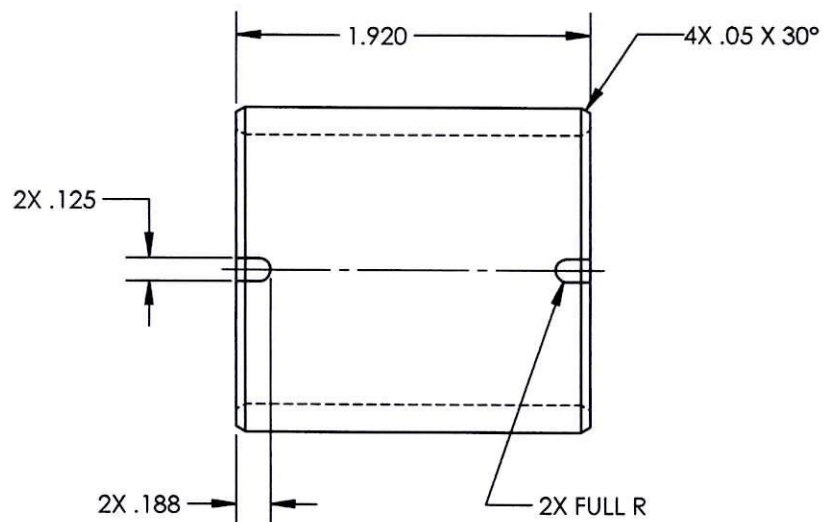
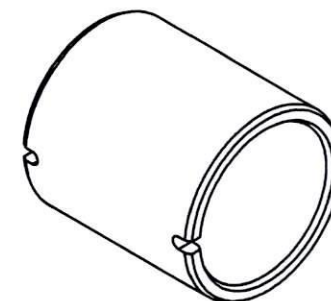
RBD3233-041-3

OUTSIDE WASHER

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3233-041-3	REV 2
MAT'L 1018/1020 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH POWDER COAT YELLOW	.XX ± .01 ANGLES ± 5°
SPEC FED #13538	.X ± .1 SURFACES = 125/✓
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	
SCALE 1:1	DATE 3/16/2012
SHEET 3 OF 5	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0039	RBD3233-041-5 ADD DIM 2X FULL R.	2/15/2016	SM	JAG



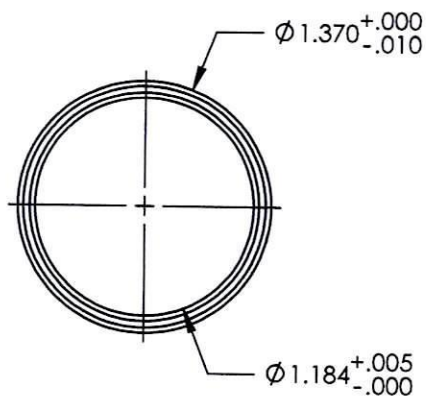
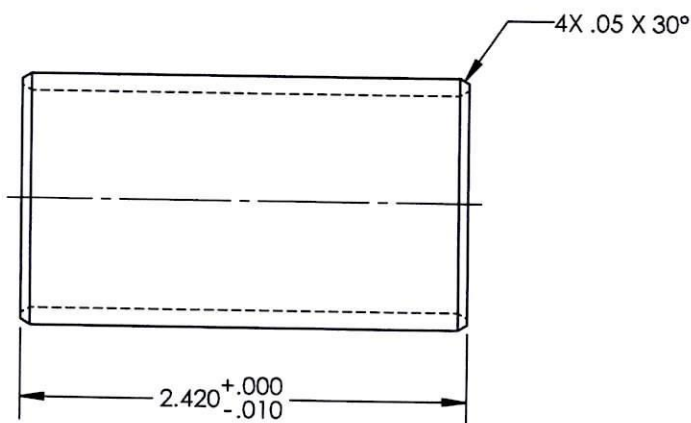
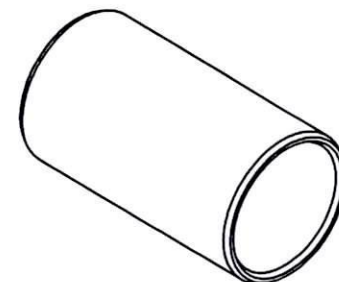
RBD3233-041-5

HUB SLEEVE

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3233-041-5	REV 2
MAT'L 1018/1020 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH	.XX ± .01 ANGLES ± 5°
SPEC	.X ± .1 SURFACES = 125/✓
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 1 SHT 1
SCALE 1:1	DATE 3/16/2012 SHEET 4 OF 5

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REVISIONS			
REV	ECR	DESCRIPTION	DATE
			INITIAL
			APPROVED

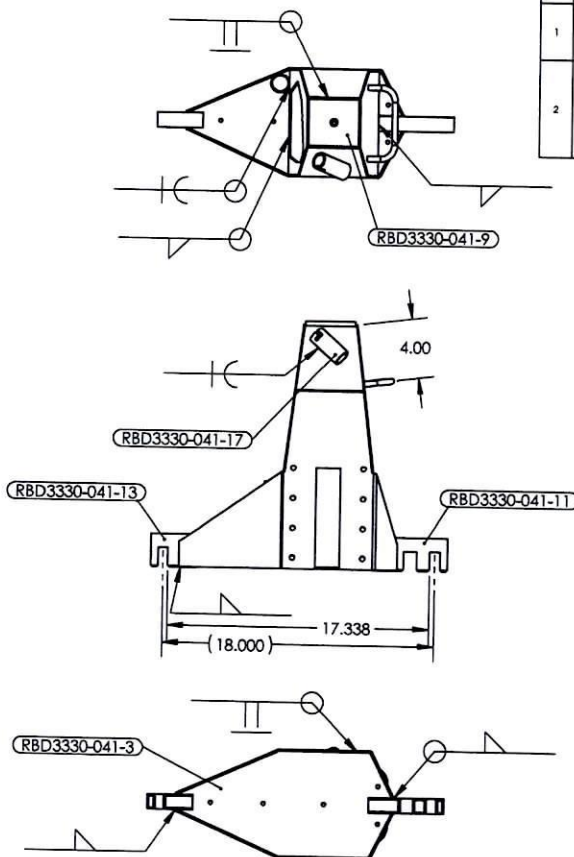
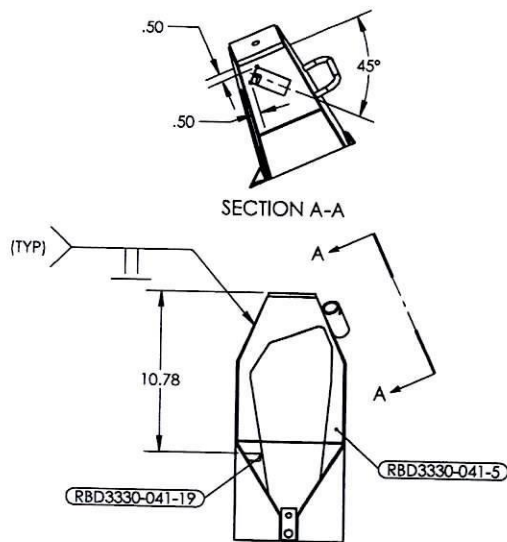


RBD3233-041-7

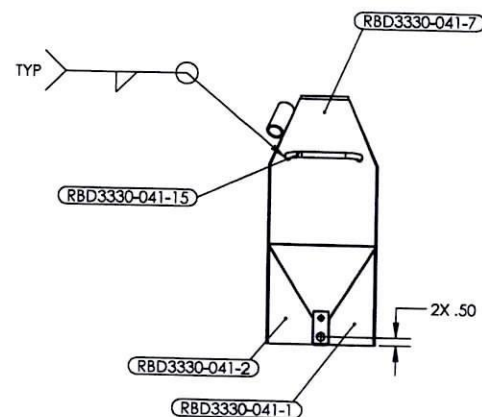
SHAFT SLEEVE

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3233-041-7	REV 2
MAT'L 1018/1020 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH	.XX ± .01 ANGLES ± 5°
SPEC	.X ± .1 SURFACES = 125/
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 1 SHT 1
SCALE 1:1	DATE 3/16/2012
SHEET 5 OF 5	

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REVISIONS							
REV	ECR	DESCRIPTION			DATE	INITIAL	APPROVED
C		UPDATE TO NEW DRAFTING STANDARD			4/16/2012	JAG	
		RBD3330-041-1 & -2 CHD DIM WAS 12.6 [12], RBD3330-041-5 ADDED MISSING DIM [12], CHD DIM WAS (16.24) IS 16.24, RBD3330-041-11 ADDED MISSING DIM [12], RBD3330-041-11 & -13 CHD DIM WAS 1.00 [10], RBD3330-041-18 CHD DIM WAS Ø 38 IS Ø 38, RBD3330-041-17 CHD DIM WAS Ø 1.13 IS Ø 1.13, RBD3330-041-19 CHD DIM WAS Ø 1.31 IS Ø 1.31, RBD3330-041-17 CHD DIM WAS Ø 1.06.			6/18/2014	DPD	GE
2	16-0039	UPDATED TO NEW DRAFTING STANDARDS, CHD ASSEY NUMBER WAS RBD412-729-11 IS RBD412-729-011, RBD3330-041 REMOVED WELD DIMENSIONS, RBD3330-041-1 CHD DIM WAS 2.3025 IS 4X 2.325, RBD3330-041-6 ADDED DIM 4.646, ADDED DIM 4X 2.323, RBD3330-042-2 MOVED TO SEPARATE SHEET, RBD3330-041-3 CHD DIM WAS 7.11 IS 7.1, RBD3330-041-4 CHD DIM WAS 10.6 IS 10X 9.99, WAS 9.97 IS 2.362, WAS 3.505 IS 3.500, RBD3330-041-5 CHD DIM WAS 7.91 IS 7.91, WAS 7.5 IS 7.7, RBD3330-041-6 CHD DIM WAS 5.93 IS 5.93, RBD3330-041-7 CHD DIM WAS 5.93 IS 5.93, WAS 5.7 IS 5.7, RBD3330-041-8 CHD DIM WAS 5.93 IS 5.93, RBD3330-041-9 CHD DIM WAS 5.93 IS 5.93, RBD3330-041-10 CHD DIM WAS 5.93 IS 5.93, RBD3330-041-11 CHD DIM WAS 5.93 IS 5.93, RBD3330-041-12 CHD DIM WAS 5.93 IS 5.93, RBD3330-041-13 CHD DIM WAS 5.93 IS 5.93, RBD3330-041-14 CHD DIM WAS 5.93 IS 5.93, RBD3330-041-15 CHD DIM WAS 5.93 IS 5.93, RBD3330-041-16 CHD DIM WAS 5.93 IS 5.93, RBD3330-041-17 CHD DIM WAS 5.93 IS 5.93, RBD3330-041-18 CHD DIM WAS 5.93 IS 5.93, 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ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	Pg.
			RBD3330-041-1	1	PANEL	1018/1020 CR		2
			RBD3330-041-2	1	PANEL	1018/1020 CR		3
			RBD3330-041-3	1	PLATE	1018/1020 CR		4
			RBD3330-041-5	1	PLATE, FRONT	1018/1020 CR		5
			RBD3330-041-7	1	PLATE, REAR	1018/1020 CR		6
			RBD3330-041-9	1	TOP PLATE	1018/1020 CR		7
			RBD3330-041-11	1	LONG PIN BRACKET	1018/1020 CR		8
			RBD3330-041-13	1	SHORT PIN BRACKET	1018/1020 CR		9
			RBD3330-041-15	1	HANDLE	1018/1020 CR		10
			RBD3330-041-17	1	HANDLE SOCKET	HREW		11
			RBD3330-041-19	1	HANDLE ARM	HREW		12

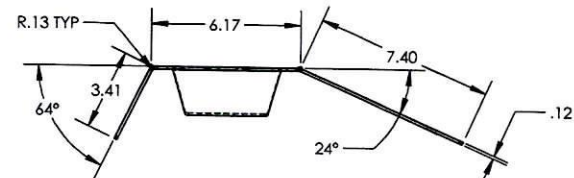
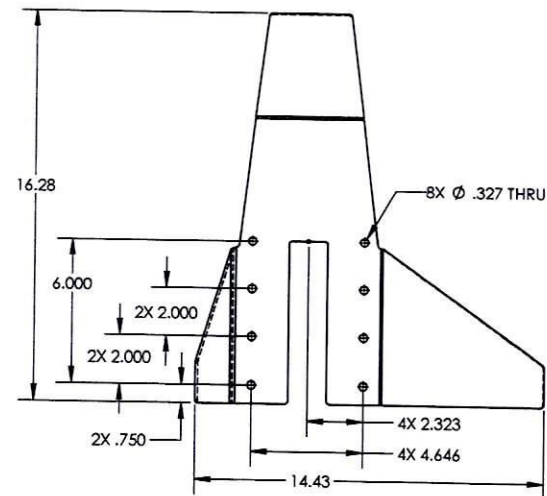
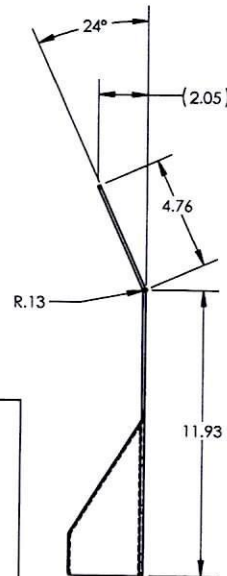
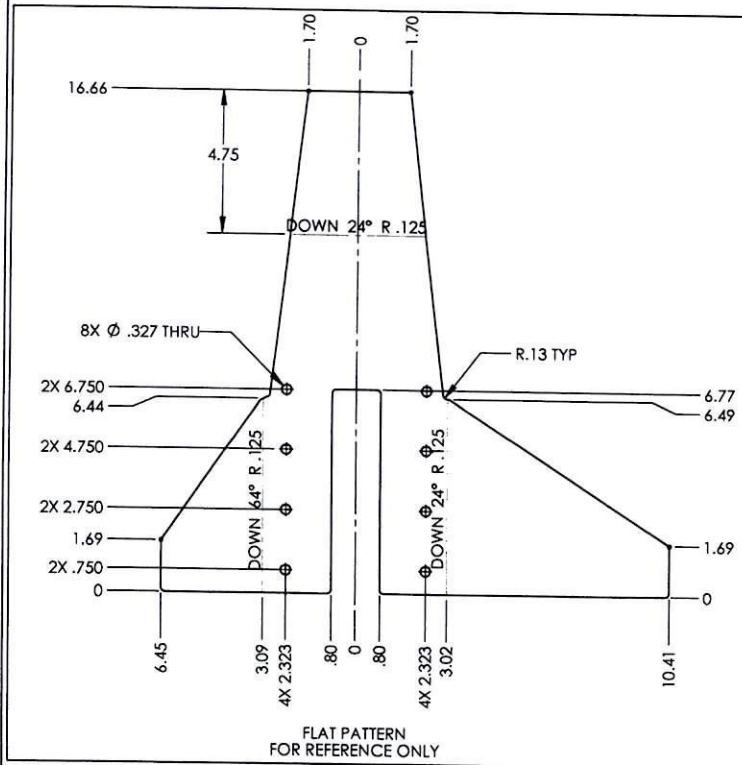
RBD3330-041
FRAME WELDMENT

NOTE:
1. POSITION PARTS PER JIG D333-041T1.
2. USED ON BELL MODELS 204, 205, 212, 214,
412, UH1, 222, 230, & AH1.

	
TITLE GROUND HANDLING WHEEL	
DWG NO.	RBD412-729-011 RBD3330-041
MATL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS = 16 DECIMALS = 10 ANGLES = 1/2°
NEXT PREP FINISH: POWDER COAT YELLOW SPEC FED 13538	1. BREAK ALL SHARP EDGES .015 ± .05" OR .015R AFTER PLATING .015 ± .05" OM AND TOI, PER ASME Y4.5M-2009
DRAWN BY: GILBERT CHECKED: CLOUGH OPFS APPRO: ANDERSON QA APPRO: LINDSAY APPROVED: GILBERT	USED ON MODEL SEE NOTE 2
SCALE 1:8	DATE 3/16/2012 SHEET 1 OF 12

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
C		UPDATE TO NEW DRAFTING STANDARD	4/16/2012	JAG
1		RBD3330-041-1 & -2 CHD DIM WAS .12 IS (.12)	6/18/2014	DPD
2	16-0039	RBD3330-041-1 CHD DIM WAS 2.323 R 4X 2.323. REMOVED DIM 4.646. ADDED DIM 4X 2.323. RBD3330-042-2 MOVED TO SEPERATE SHEET.	2/11/2016	SM
				JAG

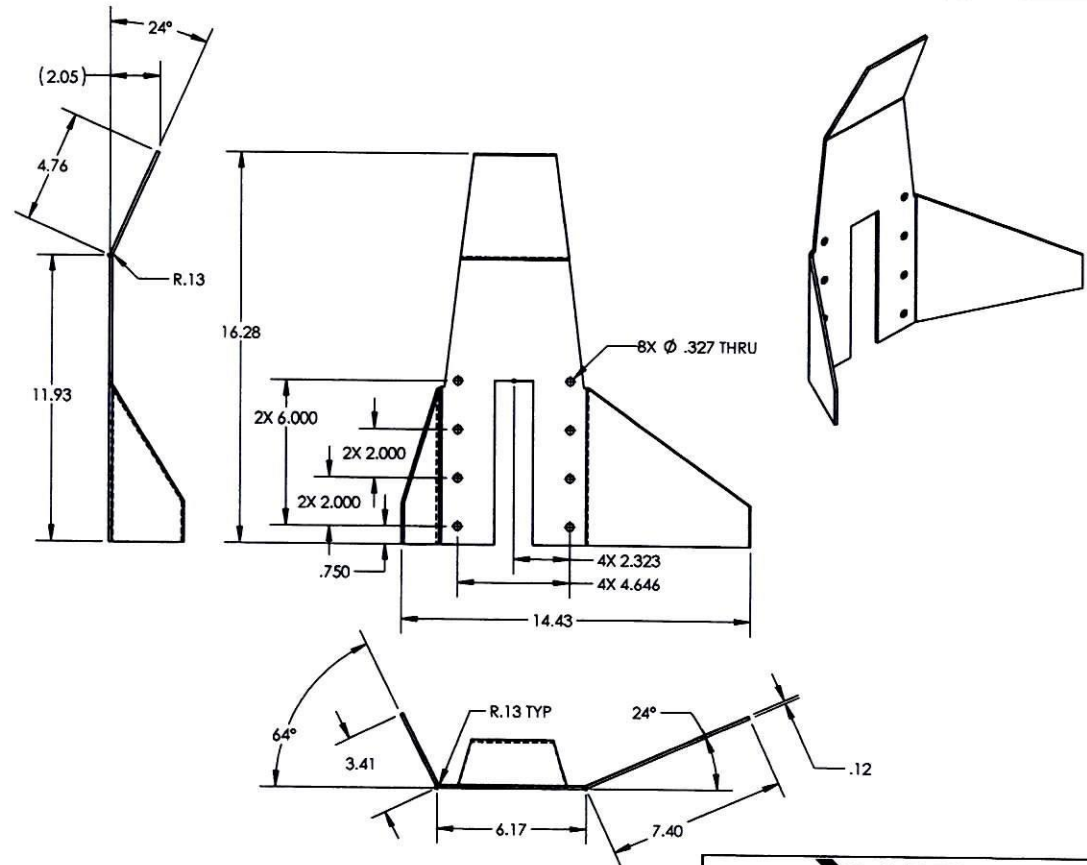
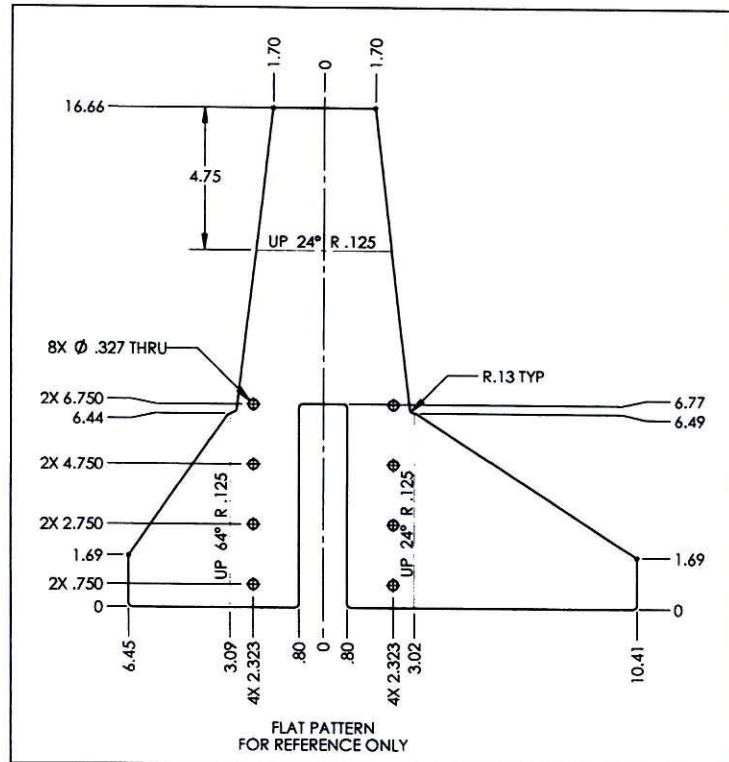


(RBD3330-041-1)
PANEL

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011	REV 2
MATERIAL 1018/1020 CR	
REAL SEE FRAME WELDMENT	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/16 .XX ± .005 ANGLES ± 1° .X ± .1° SURFACES ± 125
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 ± .005 FOR .015
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	
SCALE 1:5	DATE 3/27/2015
SHEET 2 OF 12	

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
2	16-0039	RBD3330-041-2 ADDED TO NEW SHEET.	2/11/2016	SM
				JAG

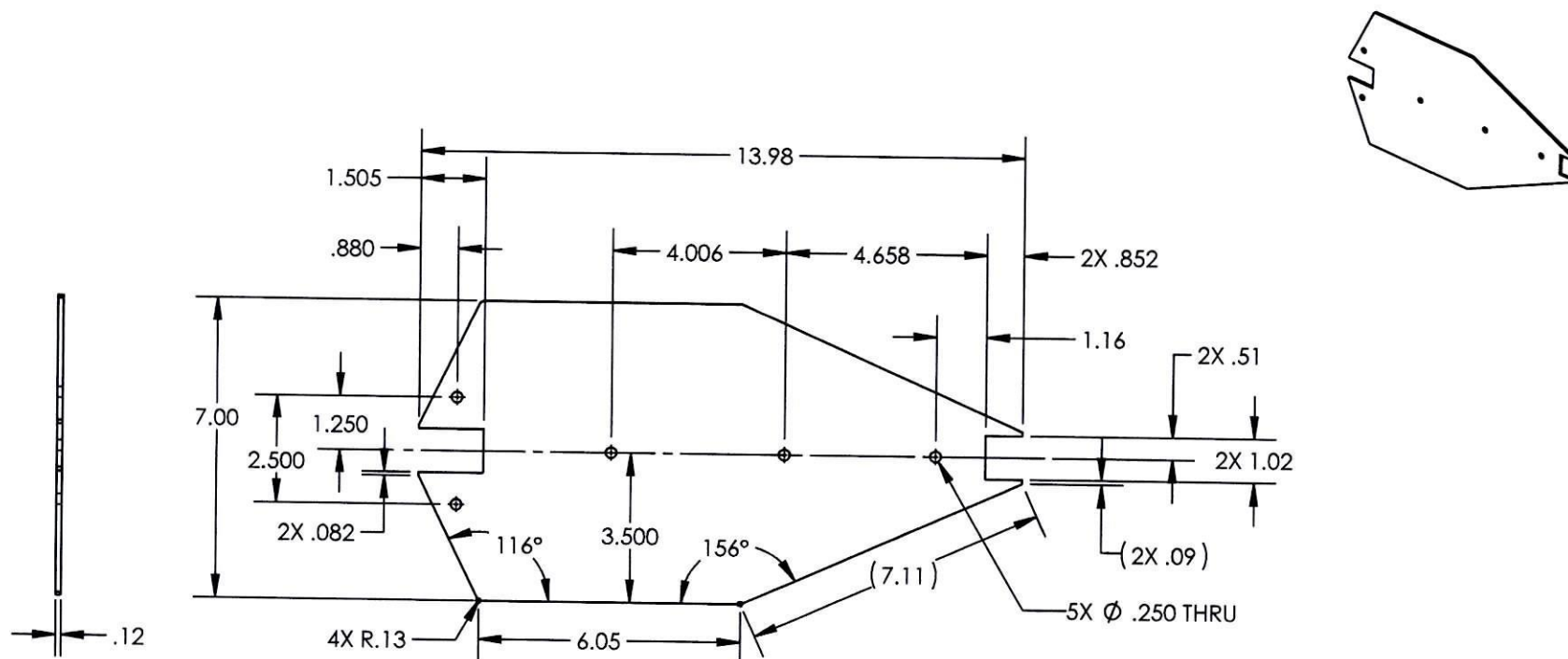


RBD3330-041-2
PANEL

DART AEROSPACE	
TITLE: GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011	REV 2
MATERIAL: 1018/1020 CR	
REMARKS: SEE FRAME WELDMENT	UNLESS OTHERWISE SPECIFIED
FINISH: SEE FRAME WELDMENT	DIMENSIONS ARE IN INCHES
SPEC: 1. BREAK ALL SHARP EDGES	XXX ± .015 FRACTIONS ± 1/16
	XX ± .03 ANGLES ± 1°
	X ± .1 SURFACES ± 1/32
DRAWN BY: GILBERT	2. DIMENSIONAL LIMITS APPLY
CHECKED: CLOUGH	AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER
QA APPR: LINDSAY	ASME Y14.5M-2009
APPROVED: GILBERT	USED ON MODEL
SCALE: 1:5	DATE: 3/27/2015
SHEET 3 OF 12	

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
C		UPDATE TO NEW DRAFTING STANDARD	4/16/2012	JAG
2	16-0039	RBD3330-041-3 CH'D DIM WAS 7.11 IS (7.11), WAS .10 IS (2X .09), WAS .087 IS 2X .082, WAS 3.505 IS 3.500.	2/11/2016	SM

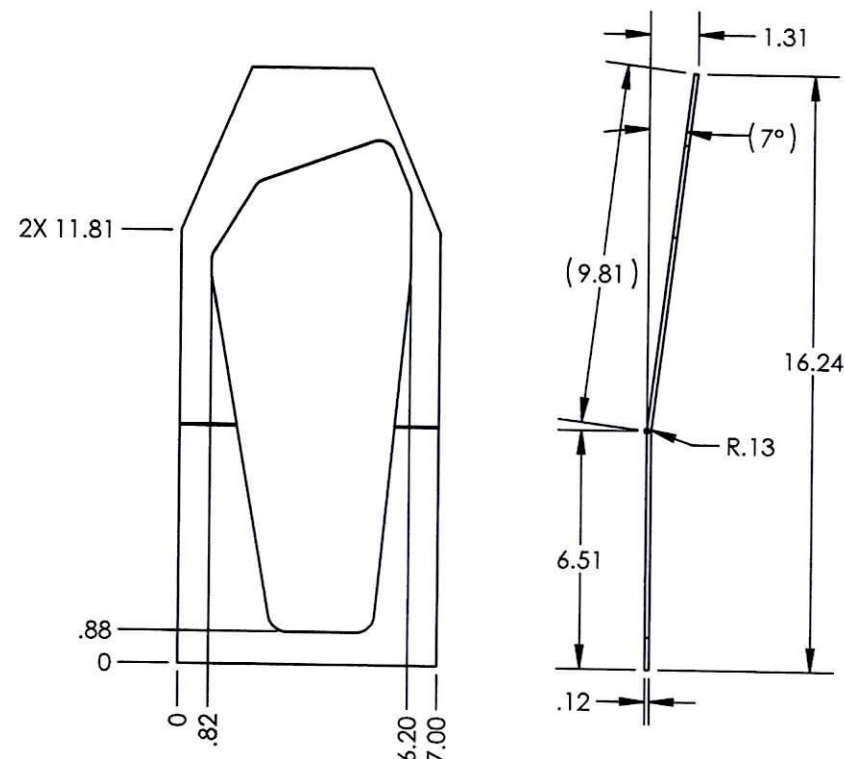
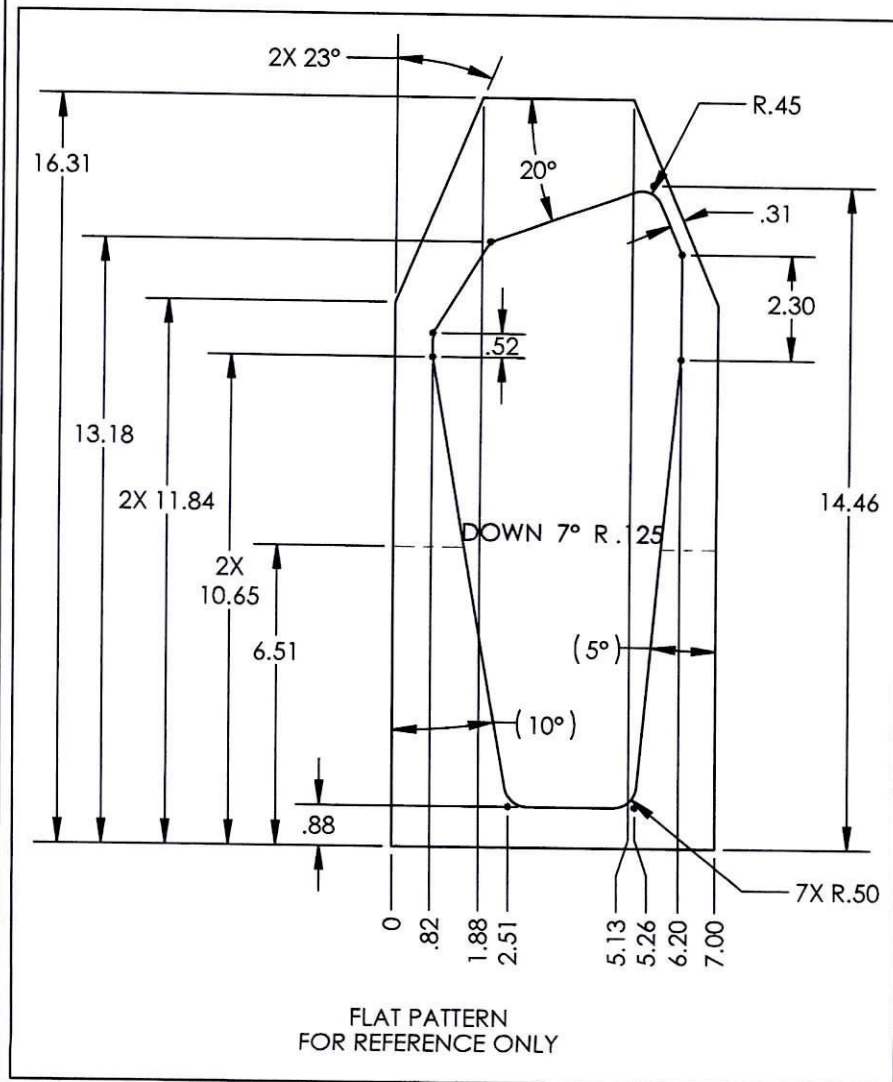


RBD3330-041-3
PLATE

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3330-041-3	REV 2
MAT'L 1018/1020 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .010 FRACTIONS ± 1/8
FINISH SEE FRAME WELDMENT	.XX ± .03 ANGLES ± 1°
SPEC	.X ± .1 SURFACES = 125/
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 ON SHT 1
SCALE 1:4	DATE 3/16/2012
SHEET 4 OF 12	

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REV	ECR	REVISIONS			
		DESCRIPTION	DATE	INITIAL	APPROVED
C		UPDATE TO NEW DRAFTING STANDARD	4/16/2012	JAG	
1		RBD3330-041-5 ADDED MISSING DIM (.12). CH'D DIM WAS (16.24) IS 16.24.	6/18/2014	DPD	GE
2	16-0039	RBD3330-041-5 CH'D DIM WAS 9.81 IS (9.81), WAS 7° IS (7°), WAS 5° IS (5°), WAS 10° IS (10°), REMOVED 9.82.	2/11/2016	SM	JAG

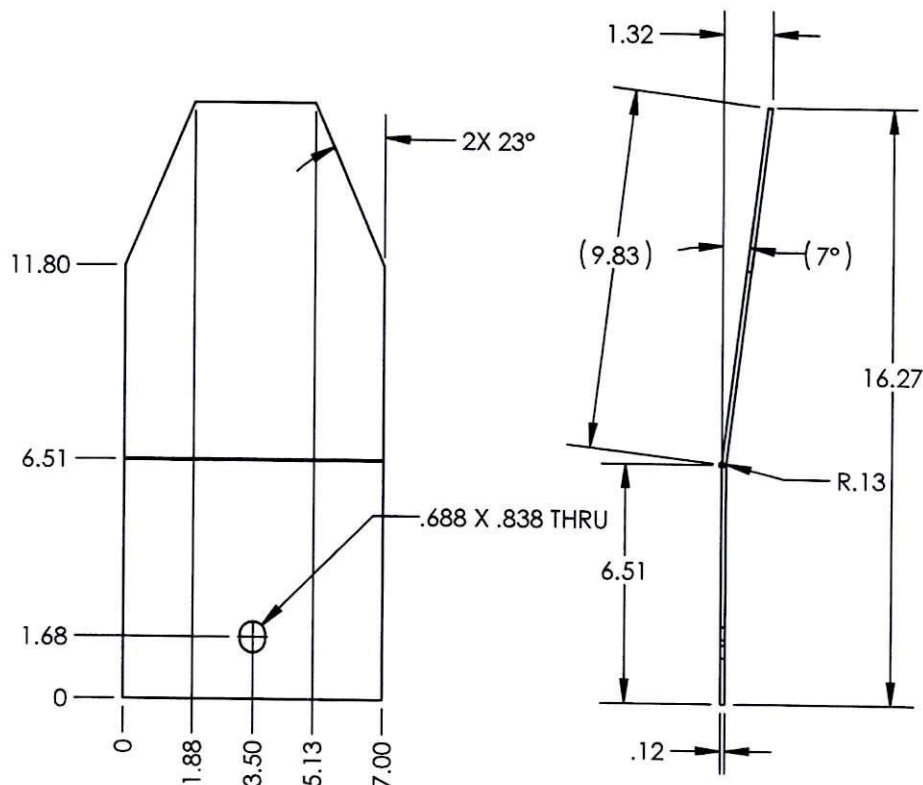
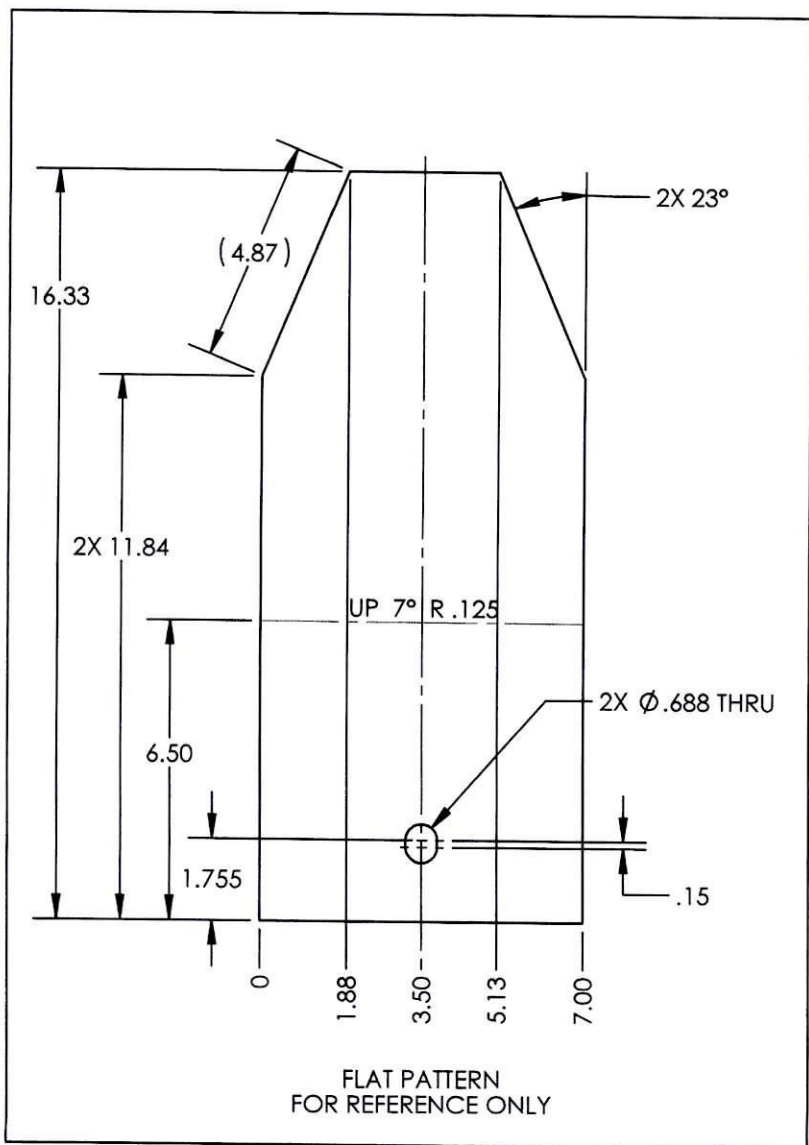


DART AEROSPACE	
TITLE GROUND HANDLING WHEEL	
DWG No. RBD412-729-011 RBD3330-041-5	REV 2
MAT'L 1018/1020 CR HEAT TREAT SEE FRAME WELDMENT SPEC UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/8 .XX ± .03 ANGLES ± 1° .X ± .1 SURFACES = 125° ✓	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DRAWN BY: GILBERT CHECKED: CLOUGH OPPTS APPR: ANDERSON QA APPR: LINDSAY APPROVED: GILBERT	
SCALE 1:5	DATE 3/16/2012
SHEET 5 OF 12	

RBD3330-041-5
PLATE, FRONT

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
C		UPDATE TO NEW DRAFTING STANDARD	4/16/2012	JAG	
1		RBD3330-041-7 ADDED MISSING DIM (.12).	6/18/2014	DPD	GE
2	16-0039	RBD3330-041-7 CH'D DIM WAS 9.83 IS (9.83), WAS 7° IS (7°), WAS 3.49 IS 3.50.	2/11/2016	SM	JAG

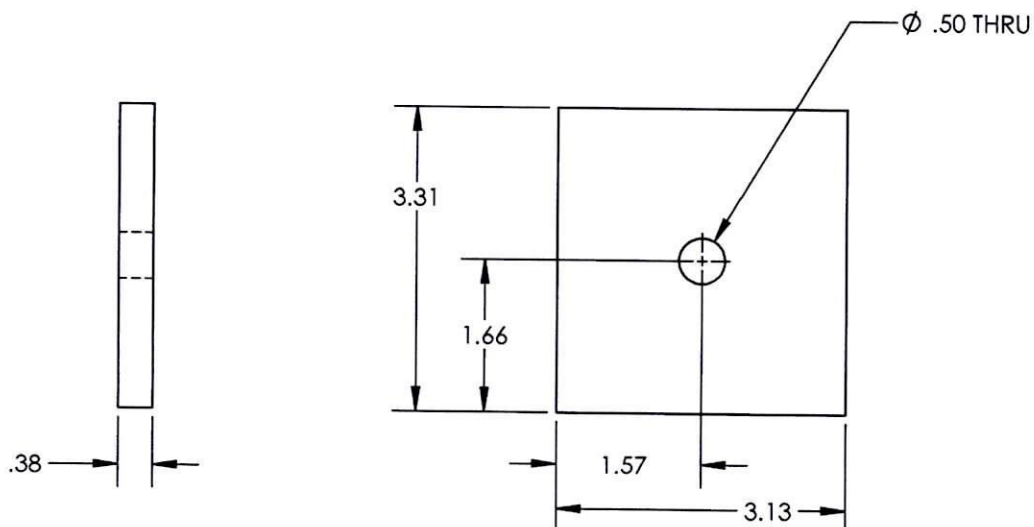
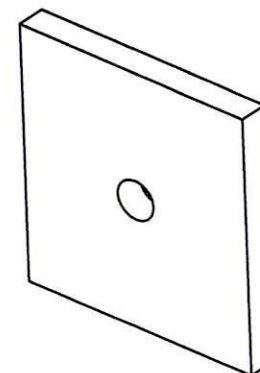


DART AEROSPACE	
TITLE GROUND HANDLING WHEEL	
DWG NO. RBD412-729-011 RBD3330-041-7	REV
MAT'L 1018/1020 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .010 FRACTIONS ± 1/8
FINISH SEE FRAME WELDMENT	.XX ± .03 ANGLES ± 1°
SPEC	.X ± .1 SURFACES = 125/
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	
SCALE 1:5	DATE 3/16/2012 SHEET 6 OF 12

RBD3330-041-7
PLATE, REAR

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
C		UPDATE TO NEW DRAFTING STANDARD	2/11/2016	JAG

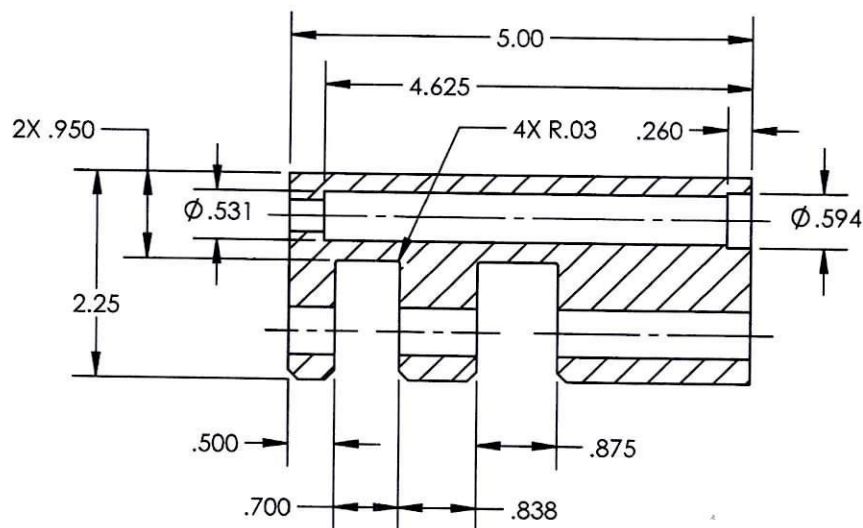
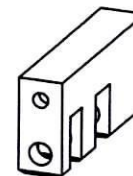


RBD3330-041-9
TOP PLATE

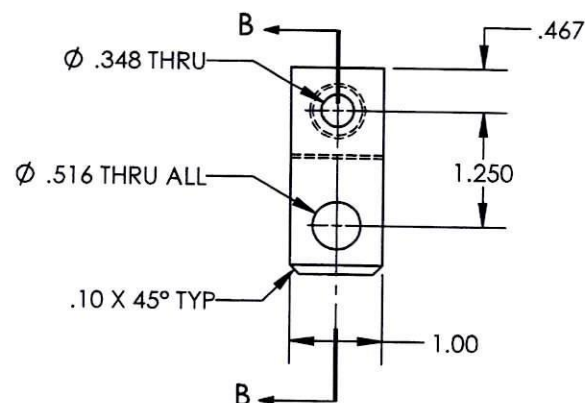
DART AEROSPACE	
TITLE GROUND HANDLING WHEEL	
DWG NO. RBD412-729-011 RBD3330-041-9	REV 2
MAT'L 1018/1020 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .010 FRACTIONS ± 1/8
FINISH SEE FRAME WELDMENT	.XX ± .03 ANGLES ± 1°
SPEC	.X ± .1 SURFACES = 125° ✓
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 SHT 1
SCALE 1:2	DATE 3/16/2012 SHEET 7 OF 12

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
C		UPDATE TO NEW DRAFTING STANDARDS	4/16/2012	JAG	
1		RBD3330-041-11 CH'D DIM WAS 1.00 IS (1.00).	6/18/2014	DPD	GE



SECTION B-B

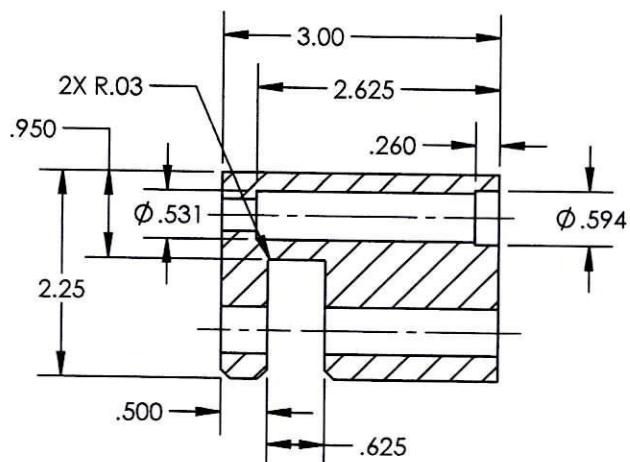
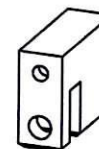


RBD3330-041-11
LONG PIN BRACKET

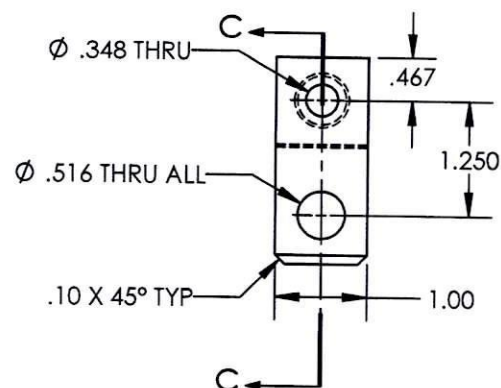
DART AEROSPACE	
TITLE GROUND HANDLING WHEEL	
DWG NO. RBD412-729-011 RBD3330-041-11	REV 2
MAT'L 1018/1020 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH SEE FRAME WELDMENT	.XX ± .01 ANGLES ± 5°
SPEC	.X ± .1 SURFACES = 125°
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 SHT 1
SCALE 1:2	DATE 3/16/2012 SHEET 8 OF 12

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
C		UPDATE TO NEW DRAFTING STANDARD	4/16/2012	JAG	
1		RBD3330-041-13 CH'D DIM WAS 1.00 IS (1.00).	6/18/2014	DPD	GE



SECTION C-C

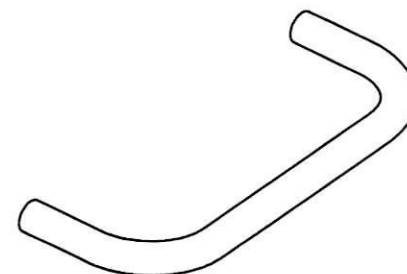
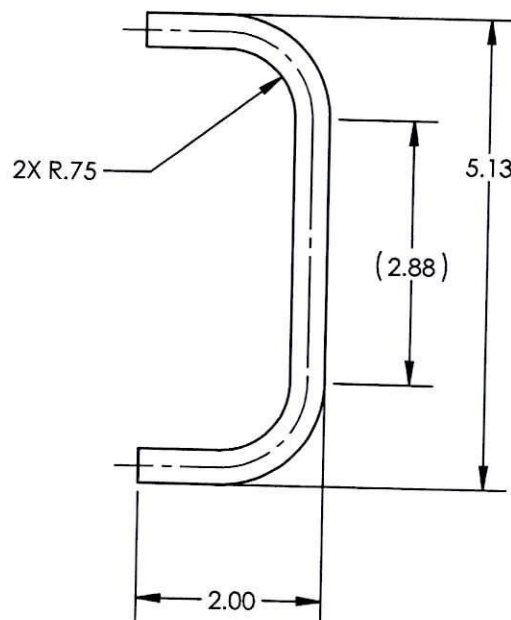
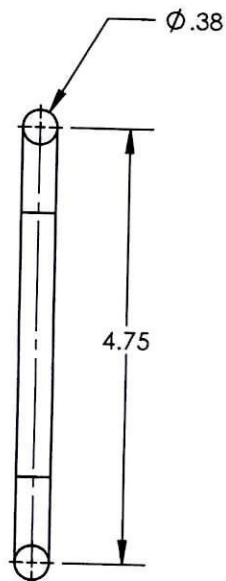


RBD3330-041-13
SHORT PIN BRACKET

DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3330-041-13	REV 2
MAT'L 1018/1020 CR	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH SEE FRAME WELDMENT	.XXX ± .005 FRACTIONS ± 1/8
SPEC	.XX ± .01 ANGLES ± 5°
	.X ± .1 SURFACES = 125/
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 SHT 1
SCALE 1:2	DATE 3/16/2016 SHEET 9 OF 12

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REV	ECR	REVISIONS			
		DESCRIPTION	DATE	INITIAL	APPROVED
C		UPDATE TO NEW DRAFTING STANDARD			
1		RBD3330-041-15 CH'D DIM WAS Ø.38 IS (Ø.38).	4/16/2012	JAG	
2	16-0039	RBD3330-041-15 CH'D DIM WAS (Ø.38) TO Ø.38.	6/18/2014	DPD	GE
			2/11/2016	SM	JAG

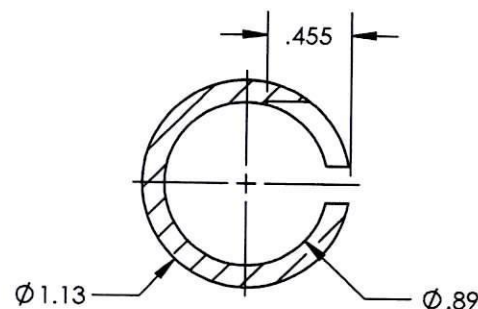
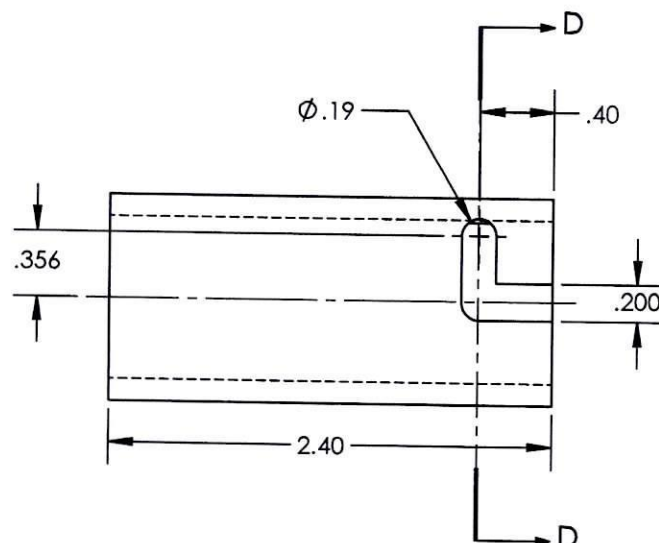


RBD3330-041-15
HANDLE

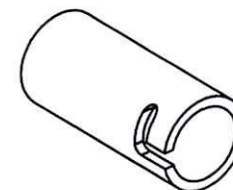
DART AEROSPACE	
TITLE GROUND HANDLING WHEELS	
DWG NO. RBD412-729-011 RBD3330-041-15	REV 2
MATERIAL 1018/1020 CR	
HEAT TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/8 .XX ± .03 ANGLES ± 1° .X ± .1 SURFACES = 125/
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	SEE NOTE 2 SHT 1
SCALE 1:2	DATE 3/16/2012 SHEET 10 OF 12

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
C		UPDATE TO NEW DRAFTING STANDARD	4/16/2012	JAG	
1		RBD3330-041-17 CH'D DIMS WAS Ø1.13 IS (Ø1.13), WAS Ø.89 IS (Ø.89).	6/18/2014	DPD	GE
2	16-0039	RBD3330-041-17 CH'D DIM WAS (Ø1.13) IS Ø1.13, WAS (Ø.89) IS Ø.89. CH'D MAT'L WAS DOM IS HREW.	2/11/2016	SM	JAG



SECTION D-D

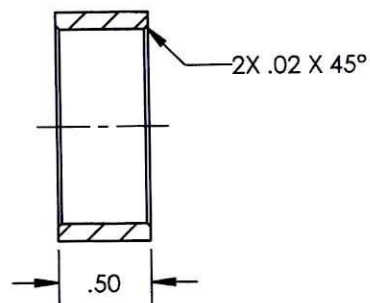


RBD3330-041-17
HANDLE RIM

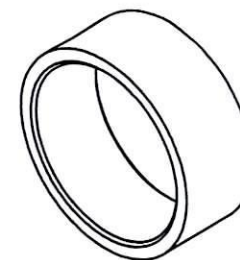
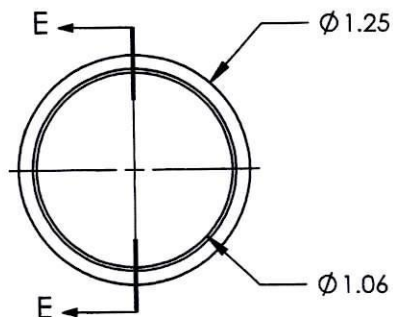
DART AEROSPACE	
TITLE GROUND HANDLING WHEEL	
DWG NO. RBD412-729-011 RBD3330-041-17	REV 2
MAT'L HREW	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH SEE FRAME WELDMENT	.XXX ± .005 FRACTIONS ± 1/8
SPEC	.XX ± .01 ANGLES ± 5°
	.X ± .1 SURFACES = 125/
DRAWN BY: GILBERT	1. BREAK ALL SHARP EDGES
CHECKED: CLOUGH	.015 x 45° OR .015R
OPPS APPR: ANDERSON	2. DIMENSIONAL LIMITS APPLY
QA APPR: LINDSAY	AFTER PLATING
APPROVED: GILBERT	3. INTERPRET DIM AND TOL PER
	ASME Y14.5M-2009
SCALE 1:1	USED ON MODEL
DATE 3/16/2012	SEE NOTE 2 SHT 1
SHEET 11 OF 12	

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REVISIONS				DATE	INITIAL	APPROVED
REV	ECR	DESCRIPTION				
C		UPDATE TO NEW DRAFTING STANDARD		4/16/2012	JAG	
1		RBD3330-041-19 CH'D DIMS WAS Ø1.31 IS (Ø1.25), WAS Ø1.075 IS Ø1.06.		6/18/2014	DPD	GE
2	16-0039	RBD3330-041-19 CH'D DIM WAS (Ø1.25) IS 1.25. CH'D MAT'L WAS DOM IS HREW.		2/11/2016	SM	JAG



SECTION E-E



RBD3330-041-19
HANDLE ARM

DART AEROSPACE	
TITLE GROUND HANDLING WHEEL	
DWG NO. RBD412-729-011 RBD3330-041-19	REV 2
MAT'L HREW HEAT TREAT FINISH SEE FRAME WELDMENT SPEC	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/✓	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DRAWN BY: GILBERT CHECKED: CLOUGH OPPTS APPR: ANDERSON QA APPR: LINDSAY APPROVED: GILBERT	
USED ON MODEL SEE NOTE 2 SHT 1	
SCALE 1:1	DATE 3/16/2012 SHEET 12 OF 12



20 Terry Fox Drive
 Vankleek Hill, Ontario K0B 1R0 , Canada
 Tel: (613) 678-3957
 Fax: (613) 678-3956

Delivery Slip No.: 22325
Date: Jan 17, 2018
Page: 1

Sold to:	Ship to:
Dart Aerospace Ltd. Att. Linda Lacelle 1270 Aberdeen Street Hawkesbury, Ontario K6A 1K7	Dart Aerospace Ltd. Att. Robert Aboud 1270 Aberdeen Street Hawkesbury, Ontario K6A 1K7
Order No.: 16908	Sold By: Walz, Christian D.
Shipped By: your truck	Ship Date: Jan 17, 2018

Description	Bin Loc	Unit	Quantity ordered	Quantity shipped	Quantity on B/O
RBD412-729-011 RBD3330-041 & RBD3233-041 Ground Handling Wheel as per drawings Rev.2 Delivery: August 15, 2017 15 certified		Set/2	1	1	
RBD412-729-011 RBD3330-041 & RBD3233-041 Ground Handling Wheel as per drawings Rev.2 Delivery: November 16, 2017		Set/2	1		1
RBD412-729-011 RBD3330-041 & RBD3233-041 Ground Handling Wheel as per drawings Rev.2 Delivery: January 15, 2018		Set/2	1		1
Material, machining, welding, finishing and assembly included not included are the following: RB 41001 Dart Placard Crate (no part #) 44" x 24" x 24" ISPM 15 certified Please supply the DXF flat pattern files for the following: RBD412-729-011 RBD3330-041-1 Panel RBD412-729-011 RBD3330-041-2 Panel RBD412-729-011 RBD3330-041-3 Plate RBD412-729-011 RBD3330-041-5 Plate, Front RBD412-729-011 RBD3330-041-7 Plate, Rear					
The delivered goods must be inspected upon receipt to confirm compliance. Should there be discrepancies please notify METEC within 30 days of delivery. The goods are otherwise deemed accepted.					

Received by _____

Thank you for your order!



20 Terry Fox Drive, Vankleek Hill, Ontario K0B 1R0

Tel. (613) 678-3957 & (613) 678-2782 Fax (613) 678-3956 metec@metec.ca

CERTIFICATE OF CONFORMITY

SOLD TO:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ont.
K6A 1K7

SHIPPED TO:

same

Quantity

1

Part Number

RBD412-729-011

Part Name

Ground Handling wheel

P.O. Number

36956

MATERIAL: supplied by METEC

We hereby certify that the above parts were made in conformance with applicable drawings.

METEC Metal Technology Inc.

A handwritten signature in blue ink, appearing to read "Jan Norris".

Jan Norris

Vankleek Hill, January 17, 2018